

ILLINOIS-AMERICAN WATER COMPANY
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ILLINOIS COMMERCE COMMISSION

EXHIBIT NO. 1

**DIRECT TESTIMONY OF
FREDERICK L. RUCKMAN**

ILLINOIS-AMERICAN WATER COMPANY

**DIRECT TESTIMONY
OF
FREDERICK L. RUCKMAN**

EXHIBIT NO. 1

1 **Q. Please state your name.**

2 A. Frederick L. Ruckman.

3 **Q. Please state your business address.**

4 A. 300 North Water Works Drive, Belleville, Illinois 62223.

5 **Q. By whom are you employed and in what capacity?**

6 A. I am employed by American Water Works Service Company, Inc. ("Service Company"), an
7 affiliate of Illinois-American Water Company ("Illinois-American" or "Company") and serve as
8 Vice President, Treasurer and Comptroller of Illinois-American.

9 **Q. Please summarize your higher education.**

10 A. I earned a Bachelor of Science degree, with a major in Accounting, from Eastern Illinois
11 University in 1971.

12 **Q. Please summarize your employment experience.**

13 A. I was employed by Northern Illinois Water Corporation ("NIWC"), a predecessor of Illinois-
14 American, beginning April, 1972, as a Staff Accountant. In April, 1980, I was promoted to
15 Comptroller and elected Secretary of NIWC. In 1994, I was elected to NIWC's Board of
16 Directors, and in 1996, I was promoted to the position of Vice President. On January 1, 2000,
17 I became Vice President and Treasurer of Illinois-American. In 2001, I became an employee
18 of the Service Company, and in 2002, I also became Comptroller of Illinois-American.

1 **Q. Please summarize your responsibilities as Vice President and Treasurer of Illinois-**
2 **American.**

3 A. I am responsible for the Finance, Cash Management, Budgeting, Rates and Growth Activities
4 functions of the Company.

5 **Q. Have you testified before this Commission in other proceedings?**

6 A. Yes. I have testified in many cases involving NIWC, including the ten most recent rate cases
7 and several cases for approval of the issuance of bonds. Since the acquisition of NIWC by
8 Illinois-American, I have testified in cases involving Illinois-American, including its most recent
9 prior rate case, Docket No. 00-0340.

10 **Q. As Vice President, Treasurer and Comptroller of the Company, are you generally**
11 **familiar with the business, facilities, and operations of the Company in each of its**
12 **divisions?**

13 A. Yes.

14 **Q. Are you also generally familiar with the books and records of the Company?**

15 A. Yes.

16 **Q. Why has the Company proposed a general rate increase?**

17 A. The proposed rates are designed to produce revenues more adequate to satisfy the revenue
18 requirements of the Company's service areas. Since the last rate case, the Company has
19 experienced increased operating expenses, and in some cases, substantially increased rate base.
20 Furthermore, the Lincoln district has not had a rate adjustment since 1994, the Pekin district has
21 not had a rate adjustment since 1998, and the Chicago Metro division, which comprises the

1 service areas recently acquired from Citizens Utilities, has not had a rate adjustment since 1995.
2 Since 1995, the Chicago Metro rate base has increased over 100%. The proposed rates are
3 intended to yield revenues sufficient to recover test year operating expenses and to produce a
4 reasonable return upon rate base.

5 **Q. What test year is the Company using in this presentation?**

6 A. The Company's presentation is based upon a fully forecasted test year ending December 31,
7 2003, as Mr. Stafford explains in his testimony.

8 **Q. Why did the Company select this test year?**

9 A. With the use of a future test year, the Company is better able to match revenues and expenses
10 and to earn its authorized rate of return.

11 **Q. Has the Company previously presented requests for rate relief based upon a future
12 test year, and has the Commission accepted such future test years?**

13 A. Yes.

14 **Q. How did the Company forecast revenues and expenses for the future test year of
15 December 31, 2003?**

16 A. The schedules contained in Exhibit Nos. 9 through 14 for the historic year ending December 31,
17 2001 are based on actual results for that year. The schedules in Exhibit Nos. 9 through 14 for
18 the current year ending December 31, 2002 and the future test year ending December 31, 2003
19 are based on forecasts.

1 These forecasts were prepared on a line-by-line basis, usually based upon actual experience for
2 prior periods generally through 2001, and upon the Company's regular budgeting methods as
3 applied to this experience. In his testimony, Mr. Stafford explains this process.

4 **Q. Will the increase to general water service customers under the proposed rates be an**
5 **across-the-board increase?**

6 A. Yes, as Mr. Stafford explains in his testimony.

7 **Q. Are plant additions planned for the years 2002 and 2003?**

8 A. Yes. As Mr. Johnson states in his testimony, the Company plans substantial new construction
9 that will be placed in service on or before December 31, 2003. The forecasted gross capital
10 expenditures exceed \$80 million.

11 **Q. Has the Company obtained a waiver in connection with the standard rate case filing**
12 **requirements?**

13 A. Yes. In Docket No. 02-0285, the Commission granted the Company's request for a waiver of
14 the standard rate case filing requirements, 83 Ill. Adm. Code Part 285, to enable the Company
15 instead to file in accordance with Staff's proposed revised Parts 285, 286 and 287.

16 **Q. Has the Company caused notice of the filing of the proposed rates to be published in a**
17 **newspaper of general circulation within each District for which revised rates are**
18 **proposed?**

19 A. Yes. Exhibit No. 1.1 is a copy of the Certificates of Publication.

1 **Q. Did the Company also cause notice of the filing to be posted in its business offices for**
2 **the various subject Districts?**

3 A. Yes.

4 **Q. Did the Company also cause notice of the filing to be sent to its customers in the**
5 **subject Districts with the first billing after filing?**

6 A. Yes. A copy of the notice sent to each customer is Exhibit No. 1.2

7 **Q. Have you prepared or caused to be prepared under your direction and supervision the**
8 **“D” schedules required in subpart G of Staff’s proposed revised standard filing**
9 **requirements applicable to this case?**

10 A. Yes. The “D” schedules are contained in Exhibit No. 13.

11 **Q. Was the information contained in the “D” schedules obtained or derived from the**
12 **books and records of the Company?**

13 A. Yes.

14 **Q. Please generally describe the “D” schedules.**

15 A. The “D” schedules present information regarding the Company’s capital structure, required rate
16 of return and certain comparative historic financial data.

17 **Q. Please describe Schedule D-1.**

18 A. Schedule D-1 is a cost of capital summary. Page 1, shows the average capital structure of the
19 Company for the test year and the computed cost of capital. Subsequent pages of Schedule D-
20 1 show such information at the end of the test year, and at the end of the current and historic

1 years. The average capital structure in the test year consists of 54.7 percent long-term debt and
2 45.3 percent common equity.

3 **Q. Please describe Schedule D-2.**

4 A. Schedule D-2 shows the average cost of short-term debt for the test year, and the cost of
5 short-term debt at the end of the test year, current year and historic year.

6 **Q. Why has the Company not included short-term debt in the capital structure?**

7 A. The estimated average of short-term debt in the test year is a relatively small balance and
8 essentially finances an approximately similar balance of construction work in progress (CWIP)
9 for the test year. Section 285.4010 of the proposed revised Standard Filing Requirements
10 applicable to this case provides for exclusion of short-term debt from the capital structure under
11 these circumstances.

12 **Q. Please describe Schedule D-3.**

13 A. Schedule D-3 shows the computation of the average embedded cost of long-term debt for the
14 test year, and at the end of the test year, current year and historic year.

15 **Q. Please describe Schedule D-4.**

16 A. Schedule D-4 shows the computation of the average cost of preferred stock. The Company
17 has fully redeemed the preferred stock as of July 1, 2002.

18 **Q. What is the Company's cost of equity?**

19 A. The Company's cost of equity is at least 11.015 percent, as determined by the Company's
20 expert witness Paul Moul. His presentation is contained in Exhibit Nos. 7 and 8.

1 **Q. What is the Company's cost of capital for the test year?**

2 A. As shown on Schedule D-1, page 1, the Company's cost of capital and required rate of return
3 is at least 8.01 percent.

4 **Q. Please describe Schedule D-5.**

5 A. Schedule D-5 shows the calculation of common equity issuance costs, for which workpapers
6 are contained in Schedule D-6.

7 **Q. Please describe Schedule D-7.**

8 A. This schedule provides detailed comparative financial data.

9 **Q. Please describe Schedule D-8.**

10 A. This schedule provides a history of changes in securities ratings.

11 **Q. Please describe Schedule D-9.**

12 A. This schedule provides a statement of cash flows.

13 **Q. Please discuss the Company's requirements for future financing.**

14 A. A significant level of capital additions will be required to meet customer needs during the five-
15 year period from 2002 through the year 2006. The amount of the presently anticipated capital
16 expenditures for this period is approximately \$140 million, net of advances and contributions.
17 The Company will be faced with significant construction requirements, dictated in part by the
18 aging nature of the Company's mains and services. The cost of necessary plant additions can
19 be expected to increase as construction costs escalate in future years. A significant portion of
20 the capital required to finance these projects will be provided by internally-generated funds.

1 Additional capital, however, must be obtained from investors who purchase debt and equity
2 securities issued by the Company.

3 **Q. Would you further discuss the financial measures related to attraction of debt and**
4 **equity capital?**

5 A. Yes. In order to be able to attract additional long-term debt and equity capital, the Company
6 must be able to demonstrate financial integrity, as measured by such factors as earnings and
7 interest coverage ratios. The Company's financial situation will deteriorate significantly unless
8 the full rate increase requested by the Company is granted. For example, the Company's pro
9 forma pre-tax interest coverage ratio at present rates is only 1.40x. Such a coverage indicates
10 that the rate increase requested in this proceeding is essential to enable the Company to attract
11 additional debt capital on reasonable terms. With a pre-tax coverage ratio of only 1.40x, I do
12 not believe that the Company would be in a position to issue long-term debt securities at a
13 reasonable rate.

14 The rates proposed by the Company will produce a pre-tax interest coverage estimated to be
15 approximately 2.81x on a pro forma basis. To permit the attraction of common equity capital, it
16 is essential that the Company be permitted an opportunity to earn the rate of return on common
17 equity which Mr. Moul recommends. In light of the need to attract substantial amounts of new
18 capital to finance necessary construction for the next several years, it is essential that favorable
19 financial ratios be maintained.

1 **Q. What are the financing requirements for 2002 and 2003?**

2 A. In connection with the acquisition of assets from Citizens Utilities earlier this year, the Company
3 issued common stock in the amount of \$103,977,302, assumed bonds of \$23,325,000 and
4 incurred debt of \$103,758,370. The Company also refinanced certain tax-exempt bonds in the
5 amount of \$24,860,000 and incurred debt of \$8,170,118 related to an exchange of assets with
6 the Village of Bolingbrook. Later this year, the Company plans to refinance the \$103,758,370
7 of debt incurred in the Citizens' transaction and issue \$30,000,00 of debt to fund payment of
8 existing debt. In 2003, the Company plans to issue \$20,000,000 of debt to refinance short
9 term debt incurred for construction expenditures and to provide working capital.

10 **Q. How has the Company responded to security concerns after the September 11, 2001**
11 **incident?**

12 A. As Mr. Mitchem explains in his testimony, the Company immediately implemented enhanced
13 security measures at all of its water and wastewater treatment facilities. Such enhanced security
14 is recommended by U.S. EPA, F.B.I., American Water Works Association and other agencies
15 and sources. Security has become an ongoing cost of doing business because the integrity of
16 the water and wastewater service the Company provides is essential to public well being. The
17 Company has recorded the enhanced security costs it is incurring since September 11, 2001 in
18 a deferral account included in rate base and proposes to amortize the deferred cost in rates over
19 a five year period. Security cost revenue requirements for future periods beginning with the
20 effectiveness of the new rates are included in rates as an operating expense.

1 **Q. From an investor's prospective, are water and wastewater utilities at least as risky as**
2 **other types of utilities?**

3 A. Yes. Historically, regulatory commissions may have tended to consider water and wastewater
4 utilities generally less risky than gas, electric, and telephone utilities. Regardless whether such
5 perception was valid in the past, clearly today there is no basis for such differentiation. Water
6 and wastewater utilities are at least as risky, if not more risky, as are gas, electric, and telephone
7 utilities. There are at least nine general forces which have caused water and wastewater utilities
8 to be as risky as, and probably more risky than, other utilities. They include:

9 1. The Safe Drinking Water Act and the Clean Water Act, which collectively impose, and
10 will continue to impose, millions of dollars of new construction obligations, monitoring
11 obligations, operating expenses and violations liability on the water and wastewater
12 utilities.

13 2. Much water and wastewater utility infrastructure has aged to the point where substantial
14 investment must be made to replace treatment facilities, mains and other facilities. Some
15 of these older facilities may have been contributed. Their replacement, however, must
16 now be financed by utilities at a significantly greater cost than that of the retired
17 property.

18 3. There is a potential for claims of injury from illness or even fatality allegedly arising from
19 the entry of an undetected or unknown contaminant into the distribution system – or
20 simply from an operational error. Water is the only utility service which is ingested. For
21 example, the 1993 *cryptosporidium* episode in Milwaukee illustrates a far more

1 pervasive impact on customers from water than any likely gas explosion, electric
2 interruption, or telephone failure. Litigation of such claims is rising. Further,
3 contaminants such as *cryptosporidium* may not be avoided totally by conventional
4 treatment procedures. As a result, the water industry is facing a necessity to expend
5 millions of dollars for new technology, such as membrane filtration, to guard against such
6 potential contamination.

7 4. Competition is at least as severe for water utilities as for other utilities. This competition
8 is in the form of customer bypass, by seeking other water sources of supply;
9 condemnation by municipalities; competing municipal-owned systems; and competing
10 energy companies seeking to provide water service.

11 5. Both regulatory law and prudence are imposing obligations for source water protection
12 and watershed protection. Such efforts require a utility to perform source water
13 assessments and attempt to police and persuade potential contaminators over whom a
14 utility has no actual control.

15 6. For some water utilities existing sources of supply may be limited. As U.S. EPA has
16 stated, "increasing development and population growth can also have a significant effect
17 on water quantity. Effective long term management of the drinking water resources
18 requires consideration of not only upstream or up-gradient activities that might affect the
19 quality and quantity of the drinking water source, but also recognition of the
20 downstream water users and demands on the aquifer." (Drinking Water Futures Forum
21 EPA Summaries of Discussion).

1 7. There is a potential necessity to provide a safer drinking water to so-called “vulnerable
2 subpopulations.” Alternative delivery approaches include installing a separate
3 distribution system dedicated solely for drinking water uses; providing bottled water;
4 and providing point-of-use/point-of-entry treatment devices.

5 8. Since September 11, 2001, security issues are causing water and wastewater utilities to
6 expend millions of dollars to conduct vulnerability assessments and to install enhanced
7 security measures to protect water treatment and distribution facilities, wastewater
8 collection and treatment facilities, source waters, and finished water.

9 9. In older urban service areas, a declining customer base is resulting in underutilized utility
10 assets.

11 **Q. Do water and wastewater utilities have unique characteristics which make them**
12 **particularly subject to increasing risk?**

13 **A. Yes.** Water and wastewater utilities have several unique attributes.

14 1. Water and wastewater utilities are capital intensive. Typically, they invest more capital
15 per revenue dollar than other types of utilities and probably most other types of
16 businesses. For example, at Illinois-American, the ratio is at least 3:1.

17 2. Much of a water or wastewater utility’s capital investment, particularly new construction
18 resulting from the requirements imposed by the Safe Drinking Water Act, the Clean
19 Water Act and security measures, is not revenue producing. The only way such
20 improvements may generate additional revenues is through rate increases which reflect

1 the opportunity to earn the authorized return on the amount of such investment which is
2 included in rate base.

3 3. External funding sources are required for most significant projects.

4 4. Fixed costs are a substantial part of every dollar of total cost of service. If revenues
5 decline due to weather, the economy, or other external causes, serious revenue risks
6 can arise.

7 5. Water usage per residential customer is in a declining trend. Indeed, customers are
8 being encouraged to adopt conservation measures. The Energy Policy Act of 1992
9 imposed national efficiency standards for various water appliances. New water
10 appliances, such as toilets, shower heads, faucets and washing machines, now use less
11 water. In the period 1991-2001, Illinois-American has experienced an average
12 reduction in residential usage of approximately 6 gallons per day per customer.

13 6. Unlike in the case of electric, gas and communications utilities, water and wastewater
14 utility service areas have remained localized and small. Because of high capital cost and
15 water quality concerns, water and wastewater service areas normally are not
16 interconnected. As a result, even one change in water or wastewater quality standards
17 or one adverse incident can have major consequences for a water or wastewater utility,
18 because they do not have a larger base over which to spread costs.

19 7. Water is the only utility service which is ingested by customers. Water is the most
20 essential of all utility services, because it is necessary for life. Thus, the standards of

1 quality and risks of liability are greater than for other types of utilities and for most other
2 businesses.

3 8. Water utilities face substantial and expanding security issues which must be addressed
4 on an ongoing basis.

5 **Q. Please elaborate on the increasing risks to which Illinois-American is exposed.**

6 A. There are several components of these risks, one of which comprises the environmental impacts
7 of the Federal Safe Drinking Water Act and the Clean Water Act.

8 Water utilities are unique because, in addition to the obligations to provide reliable service at
9 adequate quantities and pressure, they must be concerned with the health and aesthetic effects
10 of water on their customers. The Federal Safe Drinking Water Act, and related state law,
11 impose rigid requirements on water utilities to address these health and aesthetic effects.

12 The 1996 Safe Drinking Water Act amendments have compounded the requirements imposed
13 on water utilities. USEPA has promulgated new rules for Interim Enhanced Surface Water
14 Treatment, Stage I Disinfectants/Disinfectants Byproducts, Ground Water Disinfection, Stage II
15 Disinfectants/Disinfectants Byproducts, Radon, Arsenic and Final Enhanced Surface Water
16 Treatment. Also, every five years USEPA will select five new contaminants to regulate.

17 In short, the compliance with the Safe Drinking Water Act is a constantly moving target. What
18 may be satisfactory water quality one year may be a violation the next year, with imposition of
19 millions of dollars of new capital costs to meet new standards.

1 USEPA has estimated that water utilities will have to spend at least \$138 billion through 2014
2 on infrastructure improvements to meet the requirements of the Safe Drinking Water Act and
3 related public health protection. These are estimated costs to meet only current rules and do
4 not include the costs imposed by rules yet to be promulgated. A subsequent estimate by U.S.
5 EPA puts the estimated cost of overall infrastructure rehabilitation for the next twenty years at
6 \$325 billion.

7 In 2001, the Water Infrastructure Network estimated that \$24 billion per year for the next 20
8 years will be needed for drinking water infrastructure. Also in 2001, AWWA estimated such
9 expenditures to be \$250 billion over 30 years, or an average pipe replacement value of \$6,300
10 per household. *Journal AWWA*, July 2001.

11 In May, 2002, the Congressional Budget Office reported to a U.S. House panel that the
12 average annual infrastructure costs through 2019 could be anywhere from \$11.6 billion to \$20.1
13 billion for water systems and \$13.0 billion to \$20.9 billion for wastewater systems. (*Future*
14 *Investment in Drinking Water and Wastewater Infrastructure*; see also *Env. Rep.*, 4-19-
15 02, p. 865.)

16 These sorts of obligations far exceed those which other types of utilities face. Moreover, none
17 of the required improvements is revenue producing.

18 Therefore, water utilities such as Illinois-American face the risk of performing the infrastructure
19 improvements on a timely basis or be exposed to liability claims; the risks of financing these
20 costs; and the risks of less than full or timely recovery of the resulting revenue requirements in
21 rates.

1 Apart from having to suddenly meet new standards by installing new facilities, water companies
2 face additional enforcement exposure. For example, USEPA now can cite or sue water
3 companies when the state EPA has not taken appropriate enforcement action, and civil penalty
4 limits have been increased to \$25,000 per day of violation. Such penalties and enforcement
5 actions can arise regardless of whether the water company's conduct is willful.

6 Illinois-American's wastewater operations face similar regulatory impacts under the Clean
7 Water Act.

8 An AWWA study of water infrastructure needs concluded that, "[b]y not keeping rates in line
9 with expenditures, or not keeping expenditures in line with needs, utilities will face 'systematic'
10 financial risks of impaired credit and even greater future costs." *Journal AWWA*, July 2001, p.
11 28.

12 **Q. Can you give an example of how the changing standards have imposed additional risk**
13 **to Illinois-American?**

14 A. Yes, two examples are the more stringent tolerances for constituents in water and increased
15 monitoring requirements. These changes impose additional costs for facilities and operations
16 and additional compliance obligations.

17 **Q. Are there other regulatory risks?**

18 A. Yes. For example, in the past IEPA has taken the position that it can require water companies
19 to enact plumbing codes for all internal plumbing of all customers' premises, to enforce the
20 codes, and to be responsible for violations.

1 Another example comprises the constantly changing and more strict regulations under the
2 Federal Clean Water Act, and related state law, pertaining to discharges to streams and the
3 Federal and state laws pertaining to disposal of waste. Every treatment facility for drinking
4 water produces waste which must be either discharged or disposed. As in the case of the Safe
5 Drinking Water Act, these regulations also impose increased risks on Illinois-American.

6 **Q. Does Illinois-American face the risk that watershed pollution will impose increased**
7 **costs?**

8 A. Yes. As Mr. Johnson has testified, agricultural nitrate run-off to the Vermillion River has caused
9 the Company substantial increased treatment costs at its Pontiac and Streator properties. Such
10 costs are expected to continue to be incurred at these and other surface water facilities.

11 **Q. Does Illinois-American face the risk that the available surface water supply may be**
12 **limited?**

13 A. Yes. The Company faces the risk of diminished surface water supply in some districts. In the
14 event of a dry period, such as 1988, a water company can lose revenues as a result of
15 restrictions on sales and added costs in obtaining supplies. This clearly was the experience in
16 Pontiac. No significant groundwater supplies are available in Pontiac, a problem in much of
17 central Illinois. When the river supply is reduced drastically by drought, as in 1988, very
18 substantial risk is imposed on Illinois-American. This risk not only reduced sales but also
19 contributed to the necessity of the Pontiac reservoir project. The ultimate risk, however, is that
20 a prolonged drought could seriously affect the reliability of service.

1 **Q. Does Illinois-American face a risk from conservation?**

2 A. Yes. As I have testified, the Company has experienced a downward trend in residential water
3 usage since 1994. It appears that this reduction may be due to installation of low-flow
4 appliances required by law.

5 **Q. Does Illinois-American face a risk from customer bypass?**

6 A. Yes. In the Champaign Division, at least six commercial or industrial customers have installed
7 their own wells. Northwestern Steel and Wire Co., prior to its bankruptcy, in the Sterling
8 Division and Caterpillar in the Pontiac Division provide further recent examples of such bypass.
9 Sales to such customers are unpredictable because, at a whim, they can move off the
10 Company's system and leave the Company with unused capacity. Additionally, in the
11 Interurban District, two groups of large customers have obtained competitive service tariffs,
12 because they had a viable alternative supply available. These tariffs were approved by the
13 Commission. Additional wholesale customers in the Interurban District likewise are investigating
14 the possibility of obtaining service from the city of St. Louis. We understand that the City of
15 O'Fallon is considering obtaining its source of supply from St. Louis and Caseyville is
16 considering installing its own water supply facilities.

17 **Q. Does Illinois-American face a risk of eminent domain?**

18 A. Yes. Another risk is that water companies, more than other types of utilities, are more likely to
19 be the subject of condemnation efforts by municipalities. The Pekin and Peoria Districts are
20 examples of this risk. These two cities have instituted actions to take the Company's systems
21 which serve the respective cities. Such actions increase uncertainty for the Company and its
22 investor, together with the risk of expensive and uncertain litigation.

1 **Q. Does the Company face a risk arising from the need to construct additional water**
2 **supply facilities?**

3 A. Yes. For example, in 2000-2001 the Company incurred a substantial new investment of \$38
4 million in the Alton District for the new treatment facility.

5 **Q. Does Illinois-American face a risk from other regulatory pressures?**

6 A. Yes. Water and wastewater utilities particularly are subject to stringent OSHA enforcement,
7 compared with other utilities. Water and wastewater mains generally are installed deeper than
8 gas lines or electric or telephone cables, and therefore subject to more rigid requirements.
9 Similarly, strict OSHA and Clean Air Act requirements apply to process safety management of
10 chemicals.

11 **Q. Does Illinois-American face the risk of the loss of customers due to the economy?**

12 A. Yes. A water utility is susceptible to great risk if industrial or commercial customers leave the
13 area. A good example is the Streator Division. The second largest industrial customer in 1992
14 closed operations, resulting in a loss of 3% of the revenue basis. Except for a slight increase in
15 1994, sales in Streator have declined steadily since 1988. Similarly, a substantial reduction in
16 sales has been experienced in the Pontiac Division. The state prison, the largest customer in
17 Pontiac, has reduced its usage due to permanent lock down. Its usage in 1999 was 34 percent
18 below its usage in 1995. This reduction has a significant impact because the prison accounts for
19 approximately 25 percent of total sales in the Pontiac Division. Another example is the
20 bankruptcy of Laclede Steel in the Alton District and Northwestern Steel & Wire Co. in the
21 Sterling District, both of which now have gone out of business, resulting in substantial reductions

1 of usage in those Districts. This year, another industrial customer, Granite City Steel, has filed in
2 bankruptcy.

3 **Q. Does Illinois-American face a risk of water quality litigation?**

4 A. Yes. There appears to be an increase nationally in litigation of claims against water utilities for
5 alleged injuries from alleged contaminants in the water. Such claims have been made for
6 unregulated contaminants as well as for alleged exceedances of standards for regulated
7 contaminants.

8 Such litigation imposes risks in two ways. First, it imposes substantial legal costs on a water
9 utility even if the utility prevails. Second, there is a substantial risk of liability, which may not be
10 covered fully by insurance or self-insured reserves.

11 A good summary of this risk is contained in the article "Water Suppliers Carefully Watching
12 Liability Suits," *Journal AWWA*, April 2002, at p. 28.

13 **Q. Does Illinois-American face the risk of additional security measures?**

14 A. Yes. As Mr. Mitchem has testified, the Company has incurred substantial costs to implement
15 security measures.

16 The terrorist attack of September 11, 2001, subsequent FBI security alerts for water and
17 wastewater utilities, and on-going security events clearly demonstrate that security concerns will
18 be a serious and recurring issue.

19 I think that the recent policy statement of the Federal Energy Regulatory Commission illustrates
20 the impact of this risk:

1 “In light of tragic events that have taken place in our country this week and the high state of alert
2 the country is now experiencing, the Commission believes it is appropriate to provide regulatory
3 guidance on certain energy infrastructure reliability and security matters that may be affected by
4 this Commission’s rate jurisdiction. The Commission understands that electric, gas, and oil
5 companies may need to adopt new procedures, update existing procedures, and install facilities
6 to further safeguard their electric power transmission grid and gas and oil pipeline systems. The
7 Commission is aware that there may be uncertainty about companies’ ability to recover the
8 expenses necessary to further safeguard our energy infrastructure, especially if they are
9 operating under frozen or indexed rates. In order to alleviate this uncertainty, the Commission
10 wants to assure the companies we regulate that we will approve applications to recover
11 prudently incurred costs necessary to further safeguard the reliability and security of our energy
12 supply infrastructure in response to the heightened state of alert. Companies may propose a
13 separate rate recovery mechanism, such as a surcharge to currently existing rates or some other
14 cost recovery method.

15 “The Commission will give its highest priority to processing any filing made for the recovery of
16 extraordinary expenditures to safeguard the reliability of our energy transportation systems and
17 energy supply infrastructure. The Commission views the reliability of our Nation’s energy
18 transportation systems and energy supply infrastructure as critical to meeting the energy
19 requirements essential to the American people. The Commission calls for the cooperation of the
20 energy industry, customers, and state and local governments to provide any additional
21 safeguards necessary to protect the country’s vital energy transportation systems and energy
22 supply infrastructure.” 96 FERC ¶ 61,299 (2001).

1 I believe that water and wastewater operations face the same security concerns and needs for
2 safeguards that FERC has referenced for energy utilities. Water supply particularly is at risk
3 because water is ingested and is needed for fire protection.

4 This risk was acknowledged by Congress and the President when, on June 12, 2002, the
5 President signed the Public Health Security and Bioterrorism Preparedness and Response Act.

6 Among other things, the new legislation requires each community water system to conduct and
7 file with U.S. EPA a vulnerability assessment. This is an assessment of the vulnerability of a
8 system to terrorist attack or other intentional acts intended to substantially disrupt the ability of
9 the system to provide a safe and reliable water supply. The vulnerability assessment must
10 include a review of pipes and constructed conveyances, physical barriers, water collection,
11 pretreatment, treatment, storage and distribution facilities, electronic, computer or other
12 automated systems utilized for the use, storage or handling of chemicals, and operation and
13 maintenance of the system.

14 In addition, each community water system serving a population greater than 3,300 must prepare
15 or revise an emergency response plan that addresses the results of its vulnerability assessment.

16 A water system must certify to U.S. EPA that such a plan has been completed no later than 6
17 months after completion of its vulnerability assessment.

18 The emergency response plan must include plans, procedures, and identification of equipment
19 that can be implemented or used in the event of a terrorist or other intentional attack on the
20 system. The plan must also include actions, procedures and identification of equipment which

1 can obviate or significantly lessen the impact of terrorist attacks or other intentional actions on
2 the public health and safety and the supply of the water supply.

3 Preparation of the vulnerability assessment and emergency response plan likely will impose
4 significant additional costs on the Company, not to mention the additional costs of any security
5 measures implemented as a result of the vulnerability assessment.

6 **Q. What is the effect of all these risks on Illinois-American?**

7 A. These risks all cause the risk of Illinois-American to increase. Moreover, the impacts of a
8 particular risk in one District or Division are not limited to that District or Division but can affect
9 the Company as a whole.

10 **Q. Does this conclude your testimony?**

11 A. Yes.

ILLINOIS-AMERICAN WATER COMPANY

The Proofs of Publication
Will be filed at a later date.

**NOTICE OF PROPOSED
CHANGES IN SCHEDULED RATES**

Illinois-American Water Company has filed with the Illinois Commerce Commission proposed changes in its rates and charges for general water service, general wastewater service, public fire protection service, and private fire protection service, in all districts served by the Company.

These changes involve an adjustment in the rates charged for metered water service, wastewater service, public fire protection service, and private fire protection service.

A copy of the proposed schedules may be inspected by any interested party at any of our Illinois-American offices.

Illinois Commerce Commission procedures for intervention are contained in its Rules of Practice and include the timely filing of a verified petition to intervene with the Chief Clerk of the Commission and service of the petition upon this corporation, to the Commission's Administrative Law Judge, Staff witnesses, and all other parties. This petition must contain the information required by the Rules of Practice.

If you are interested in this matter, you may obtain additional information either directly from Illinois-American Water Company, 300 N. Water Works Road, Belleville, IL, 62223, or by addressing the Chief Clerk of the Illinois Commerce Commission, 527 East Capitol Avenue, Springfield, Illinois 62701.

ILLINOIS-AMERICAN WATER COMPANY

ILLINOIS COMMERCE COMMISSION

EXHIBIT NO. 2

DIRECT TESTIMONY OF

R. DOUGLAS MITCHEM

ILLINOIS-AMERICAN WATER COMPANY

**DIRECT TESTIMONY
OF
R. DOUGLAS MITCHEM**

EXHIBIT NO. 2

1 **Q. Please state your name.**

2 A. R. Douglas Mitchem

3 **Q. Please state your business address.**

4 A. 300 North Water Works Drive, Belleville, Illinois 62223.

5 **Q. By whom are you employed and in what capacity?**

6 A. I am employed by American Water Works Service Company, Inc. ("Service Company"), an
7 affiliate of Illinois-American Water Company ("Illinois-American" or "Company"), and serve as
8 Vice President – Operations for Illinois-American.

9 **Q. Please summarize your higher education experience.**

10 A. I graduated from Bluefield State College at Bluefield, West Virginia receiving a B.S. degree in
11 Civil Engineering Technology. I also graduated from Fontbonne University at St. Louis,
12 Missouri receiving a Master of Business Administration.

13 **Q. Please summarize your employment experience.**

14 A. I began my career on May 1, 1971 at West Virginia-American Water Company in Bluefield,
15 West Virginia as a water treatment operator. West Virginia-American Water like Illinois-
16 American is a wholly owned subsidiary of American Water Works Company. In 1976, I
17 transferred to the Hinton District of West Virginia-American as Manager and in 1978 I
18 transferred to Marion, Ohio as Manager of the Marion Water Company currently Marion
19 District of Ohio-American Water Company. In 1988, I transferred to Belleville, Illinois as

1 Southern Division Operations Manager of Illinois-American and in 1992 became the
2 Operations Manager of the Interurban District of Illinois-American. In 1996, I became the
3 Director of Business Development for Illinois-American and in 1998 became Vice President-
4 Operations of Illinois-American, the position I currently hold. In 2000, I became an employee
5 of the Service Company.

6 **Q. Are you a member of any industry or professional organizations?**

7 A. Yes, I am a member of the American Water Works Association.

8 **Q. Have you testified before this Commission in other proceedings?**

9 A. Yes.

10 **Q. Please summarize your responsibilities as Vice President – Operations of Illinois-**
11 **American.**

12 A. I have overall responsibility for the day-to-day operation of the Company. In that endeavor, I
13 am in daily contact with each Division Manager and direct them as they go about their daily
14 duties. I also assist the Company President and other officers in developing goals and
15 objectives for the Company and in administering policies and procedures as approved by the
16 Board of Directors of the Company. It is my responsibility to ensure that these goals and
17 objectives are achieved. I, along with other Company officers, represent the Company before
18 governmental and regulatory agencies. I, along with others, formulate financial objectives and
19 budgets and provide the direction necessary to meet those objectives while remaining within
20 budgetary guidelines. I am part of the management team that establishes employee levels,
21 working conditions, and safety requirements within guidelines established by law, the Board of

1 Directors and the President of the Company. My responsibilities include establishing guidelines
2 for negotiation of labor contracts with 15 labor unions, as well as other special contracts. I have
3 the responsibilities associated with developing and controlling the Company's operating and
4 maintenance and capital budgets, as well as providing direction in the areas of construction,
5 purchases or other acquisitions, operation, maintenance and protection of all property, facilities
6 and equipment required to maintain water quality standards and continuity of service.

7 **Q. As Vice President - Operations of the Company, are you generally familiar with the**
8 **business, facilities, and operations of the Company in each of its divisions?**

9 A. Yes.

10 **Q. Are you also generally familiar with the books and records of the Company?**

11 A. Yes.

12 **Q. Please summarize the history of Illinois-American.**

13 A. The first water utility franchises in the areas served by the five operating Districts of Illinois-
14 American prior to acquisition of the properties of United Water-Illinois, Northern Illinois Water
15 Corporation and Citizens Utilities Company of Illinois were granted between 1875 and 1889.
16 The earliest water system was franchised in the Alton District in 1875, followed by water
17 systems franchises in the Cairo and Interurban Districts in 1885. The Pekin District's franchise
18 was granted in 1886; and the Peoria District's franchise was granted in 1889. Prior to June 1,
19 1978, American Water Works Company, Inc. ("American") had four (4) operating subsidiaries
20 in the State of Illinois. These were Alton Water Company, The Cairo Water Company, East
21 St. Louis and Interurban Water Company, and Peoria Water Company. The initial step in the

1 creation of the current Illinois-American Water Company came on June 1, 1978, when the
2 name of East St. Louis and Interurban Water Company was changed to Illinois-American
3 Water Company. On February 1, 1981, American acquired Pekin Water Works Company.
4 In Docket No. 81-0727, the Commission approved the merger of The Cairo Water Company
5 and Pekin Water Works Company into Illinois-American Water Company, effective July 1,
6 1982. On January 1, 1985, with Commission approval in Docket No. 84-0204, the merger of
7 all American subsidiaries in Illinois became complete when Alton Water Company and Illinois-
8 American Water Company were merged into Peoria Water Company, the name of which was
9 then changed to Illinois-American Water Company. Effective during 1987, for organizational
10 and management purposes, the Company further consolidated its operations by forming two
11 Divisions within the Company. The Northern Division consisted of the Peoria and Pekin
12 Districts and the Southern Division consisted of Alton, Cairo and Interurban Districts.

13 On June 25, 1999, American acquired all of the common stock of National Enterprises Inc.
14 (“NEI”), and NEI was merged into American. One of the operating water utilities owned by
15 Continental Water Company, a subsidiary of NEI, was Northern Illinois Water Corporation
16 (“NIWC”). On March 29, 2000, in Docket No. 99-0418, the Commission approved the
17 merger of NIWC into Illinois-American. The merger was completed on March 31, 2000. As a
18 result, the four former Divisions of NIWC – Champaign, Sterling, Streator, and Pontiac – each
19 have become Districts of Illinois-American’s new Eastern Division.

20 On May 31, 2000, Illinois-American acquired United Water Illinois, Inc. (UWIL), which
21 provided public utility water service in the City of Lincoln and vicinity. UWIL was merged with

1 and into Illinois-American. The acquisition and merger were approved by the Commission in
2 Docket No. 99-0457, on May 10, 2000.

3 In January 2002, Illinois-American acquired the Illinois water and wastewater assets of Citizens
4 Utilities Company of Illinois. The Commission approved the transaction in Docket No. 00-
5 0476, on May 15, 2000.

6 In 1993, the Illinois-American management structure was reorganized to locate all the Company
7 officers, accounting, legal and rate functions at the corporate office in Belleville, Illinois.
8 Previously, the office of the President was located at, and certain financial, accounting, legal and
9 rate functions were provided from, a Service Company office in Richmond, Indiana. These
10 services were shared with other affiliated companies. As a result of the restructuring, the
11 Richmond office of the Service Company was eliminated, except for computer system support.

12 **Q. Please describe the relationship between Illinois-American and American.**

13 A. American owns all of the outstanding stock of Illinois-American.

14 **Q. Please describe the relationship between Illinois-American and the Service Company.**

15 A. Illinois-American contracts for services to be supplied at cost by the Service Company, which
16 also is a subsidiary of American. The Service Company office in Voorhees, New Jersey
17 provides support to the Illinois-American staff in the areas of accounting, engineering,
18 operations, regulatory practices, finance, water quality, information systems, personnel
19 information and training, purchasing, insurance, safety, and community relations. The Service
20 Company also operates facilities for data processing in Richmond, Indiana and for water quality
21 analyses in Belleville, Illinois.

1 **Q. Has the contractual relationship between the Service Company and Illinois-American**
2 **been approved by this Commission?**

3 A. Yes. The current contract between the Company and the Service Company was approved by
4 the Commission on July 19, 1989, in Docket No. 88-0303.

5 **Q. Please describe American's new call center.**

6 A. In April 2001, American opened a new, system-wide customer call center in Alton, Illinois.
7 The facility employees in excess of 300 associates and is designed to enhance, through shared
8 services, American's capability to respond to customer needs more effectively at a lower cost.
9 In addition, customers in the Chicago Metro District now enjoy 24 hour a day, seven day a
10 week response to inquires. This continuous service level was not provided until the acquisition
11 by Illinois-American. All of American's subsidiaries have been transitioning to this centralized
12 facility. For Illinois-American, the transition to the national call center took place on September
13 3, 2002.

14 **Q. Please generally describe the business and service areas of the Company.**

15 A. At the present time, Illinois-American provides public utility water service in four Divisions, as
16 follows:

| <u>Division</u> | <u>Districts</u> |
|-----------------|---|
| Northern | Peoria Pekin Lincoln |
| Southern | Alton Cairo Interurban (including East St. Louis) |
| Eastern | Champaign Sterling Streator |

| | | |
|----|---------------|---|
| 1 | | Pontiac |
| 2 | | |
| 3 | Chicago Metro | Alpine Heights |
| 4 | | Arbury |
| 5 | | Arrowhead |
| 6 | | Bolingbrook |
| 7 | | Central States |
| 8 | | Chicago Suburban |
| 9 | | Country Club |
| 10 | | DuPage |
| 11 | | Fernway |
| 12 | | Hollis |
| 13 | | Liberty Ridge |
| 14 | | Lombard |
| 15 | | Midwest Palos |
| 16 | | Moreland |
| 17 | | Nettle Creek |
| 18 | | Potter Golf/Sunset Manor/Forest Estates |
| 19 | | Ridgecrest |
| 20 | | River Grange |
| 21 | | Rollins/Elgin |
| 22 | | Santa Fe |
| 23 | | Southwest Suburban |
| 24 | | Terra Cotta |
| 25 | | Valley Marina |
| 26 | | Valley View |
| 27 | | Waycinden |
| 28 | | West Suburban |
| 29 | | Wheaton Water/Derby Glen |

30 The Eastern Division is the former service area of Northern Illinois Water Corporation. The

31 Chicago Metro Division is the former service area of Citizens Utilities Company of Illinois.

32 In addition, Illinois-American provides public utility wastewater service in the following Districts
33 of its Chicago Metro Division:

| | |
|----|---|
| 34 | Arbury |
| 35 | Arrowhead |
| 36 | Chicago Suburban |
| 37 | Country Club |
| 38 | DuPage |
| 39 | Fernway |
| 40 | Nettle Creek |
| 41 | Potter Golf/Sunset Manor/Forest Estates |
| 42 | Ridgecrest |
| 43 | River Grange |
| 44 | Rollins/Elgin |
| 45 | Santa Fe |
| 46 | Southwest Suburban |

1 Terra Cotta
2 Valley-Marina
3 Valley View
4 Waycinden
5 West Suburban

6 **Q. Have you caused to be prepared an exhibit which summarizes, by District, a**
7 **description of the systems in each Division?**

8 A. Yes. Exhibit No. 2.1 provides system data for each Division as of June 30, 2002. It includes
9 customer totals, source of water supply data, water distribution data, and wastewater collection
10 and treatment data.

11 **Q. Please describe further the Company's acquisition of the properties of Citizens**
12 **Utilities Company of Illinois.**

13 A. The Company completed the acquisition on January 15, 2002. As shown on Exhibit No. 2.1, a
14 total of twenty-six service areas were acquired. These service areas became Districts of a new
15 Division called Chicago Metro.

16 As shown on Exhibit No. 2.1, some of the Districts are served by a purchased water supply
17 and some by wells. Wastewater service is provided in thirteen of the Districts, with treatment
18 facilities in eleven of the Districts.

19 **Q. In light of September 11, 2001, has Illinois-American experienced increased operating**
20 **expenses for enhanced security measures at its facilities?**

21 A. Yes.

1 **Q. Is Illinois-American able to describe the enhanced security measures it has**
2 **implemented without compromising those measures?**

3 A. No. It would be contrary to sound public policy to describe these measures in testimony or
4 other materials that are generally available to the public or the other parties in this proceeding.
5 The heart of our security plan is protections that are unknown to potential terrorists and
6 saboteurs. Consequently, Illinois-American is not in a position to disseminate security sensitive
7 information publicly or even to the other parties regarding the nature of the security measures.
8 Even our own lawyers and all but two of our employees do not know the entire substance of
9 our security plan. Disclosure of these measures must be limited on a strictly need-to-know
10 basis. Therefore, we are not able to file a description of them with the Commission or disclose
11 them to the parties, even under the Commission's standard confidentiality provisions, because
12 such confidentiality provisions do not contemplate the type of threats posed by the September
13 11 attacks. Otherwise, we could be risking the security of our customers and the safety of our
14 water service.

15 **Q. Are the operating expenses for enhanced security measures included in test year**
16 **revenue requirements?**

17 A. Yes.

18 **Q. How can the Commission confirm that these increased security costs are reasonable?**

19 A. We recognize that the Commission may review our security expenses for purposes of
20 determining their reasonableness. We propose to make security sensitive cost information
21 available for review at our offices by a designated, security cleared Commission Staff member,
22 under a nondisclosure certification.

1 **Q. Are the enhanced security measures necessary to protect the Company's facilities and**
2 **water service from terrorism threats?**

3 A. Yes.

4 **Q. Are these security measures and security operating expenses ongoing?**

5 A. Yes. We expect them to continue indefinitely.

6 **Q. Does this conclude your testimony?**

7 A. Yes.

ILLINOIS-AMERICAN WATER COMPANY
SYSTEM DATA
June 30, 2002

Exhibit No. 2.1
Page 1 of 2

| | | | | CUSTOMERS | | WATER SYSTEM FACILITIES | | | | | | | | | | | | | | |
|---|--|-----|-------------------|---------------|------------|-------------------------|-------------------|-------|---------------------|----------|----------------|---------------|-------------------|-----------------------|----------------|----------------|----------------------------|-----------------------|----------------------------|------------------------|
| | | | | As Of 6/30/02 | | Purchased Water | | Wells | | | | Surface Water | | Total System | | | Distribution System | | | |
| DISTRICT | COMMUNITIES SERVED | | COUNTY | Water | Wastewater | PW Connections | PW Capacity (mgd) | Wells | Well Capacity (mgd) | Well WTF | Well WTF (mgd) | SW WTF | SW Capacity (mgd) | System Capacity (mgd) | 2001 ADD (mgd) | 2001 MDD (mgd) | Distribution Storage Tanks | Storage Capacity (mg) | Distribution Pump Stations | Water Main (miles) (3) |
| | Primary | No. | | | | | | | | | | | | | | | | | | |
| CHICAGO METRO DIVISION | | | | | | | | | | | | | | | | | | | | |
| Alpine Heights | Village of Orland Park | 1 | Will | 233 | 233 | 1 | 0.14 | | | | | | | 0.14 | 0.05 | 0.12 | | | | |
| Arbary | Mokena & Arbary Hills Sub. | 2 | Will | 467 | 463 | | | 2 | 1.55 | 2 | 1.55 | | | 1.55 | 0.17 | 0.27 | 1 | 0.20 | | |
| Arrowhead | Wheaton & Milton Township | 2 | DuPage | 598 | 0 | 1 | 0.33 | 1 | 0.94 | 1 | 0.94 | | | 1.27 | 0.18 | 0.45 | 2 | 0.40 | 1 | |
| Central States | Joliet | 1 | Will | 47 | 47 | | | 1 | 0.14 | 1 | 0.14 | | | 0.14 | 0.01 | 0.04 | | | | |
| Chicago Suburban | Mt. Prospect & Prospect Heights | 2 | Cook | 4,335 | 4,280 | 1 | 4.50 | 2 | 3.17 | 2 | 3.17 | | | 7.67 | 1.94 | 2.72 | 2 | 1.90 | 2 | |
| Country Club | Elmhurst | 1 | DuPage | 392 | 393 | 1 | | 1 | 0.35 | 1 | 0.35 | | | 0.35 | 0.10 | 0.18 | 1 | 0.20 | 1 | |
| DuPage | Lisle & Lisle Township | 2 | DuPage | 1,043 | 1,004 | 1 | 1.66 | 2 | 1.97 | 2 | 1.97 | | | 3.63 | 0.58 | 0.81 | 2 | 0.20 | 1 | |
| Fernway | Orland Park & Orland Hills | 1 | Cook | 1,900 | 1,885 | 1 | 2.20 | 1 | 1.01 | 1 | 1.01 | | | 3.21 | 0.55 | 0.95 | 2 | 0.45 | 1 | |
| Hollis | Sandwich | 1 | Kendall | 41 | 0 | | | 1 | 0.09 | 1 | 0.09 | | | 0.09 | 0.01 | 0.02 | | | | |
| Liberty Ridge West | Wheaton & Winfield | 1 | DuPage | 1,134 | 0 | 1 | 1.00 | 3 | 2.14 | 2 | 2.14 | | | 3.14 | 0.29 | 0.94 | | | | |
| Liberty Ridge East | Wheaton | | DuPage | 138 | 0 | 1 | 1.73 | 1 | 1.20 | 1 | 1.20 | | | 2.93 | 0.04 | 0.17 | | | | |
| Lombard | Lombard & Villa Park | 2 | DuPage | 265 | 0 | 1 | 2.00 | 1 | 0.55 | 1 | 0.55 | | | 2.55 | 0.07 | 0.10 | | | | |
| Midwest Palos | Palos Township | 1 | Cook | 61 | 0 | | | 1 | 0.30 | 1 | 0.30 | | | 0.30 | 0.01 | 0.05 | | | | |
| Moreland | Norwood Township | 1 | Cook | 175 | 152 | 1 | 0.14 | | | | | | | 0.14 | 0.06 | 0.09 | | | | |
| Nettle Creek | Morris | 1 | Grundy | 58 | 58 | | | 1 | 0.58 | 1 | 0.58 | | | 0.58 | 0.02 | 0.04 | | | | |
| Potter Golf/Sunset Manor/Forest Estates | Niles, Glenview & Rolling Meadows | 3 | Cook | 0 | 526 | | | | | | | | | | | | | | | |
| Ridgecrest | Morris | | Grundy | 73 | 74 | | | 1 | 0.22 | 1 | 0.22 | | | 0.22 | 0.02 | 0.04 | | | | |
| River Grange | St. Charles | 1 | Kane | 23 | 24 | | | 1 | 0.24 | 1 | 0.24 | | | 0.24 | 0.01 | 0.02 | | | | |
| Rollins/Elgin | Elgin | 1 | Kane | 89 | 89 | | | 1 | 0.25 | 1 | 0.25 | | | 0.25 | 0.02 | 0.05 | | | | |
| Santa Fe | Lemont & Woodridge | 2 | DuPage | 251 | 182 | 1 | 0.68 | 2 | 1.32 | 2 | 1.32 | | | 2.00 | 0.50 | 1.23 | 1 | 0.50 | | |
| Southwest Suburban | Homer Glen | 1 | Will | 6,498 | 6,457 | 1 | 4.11 | 8 | 8.30 | 6 | 8.30 | | | 12.41 | 2.13 | 5.51 | 4 | 6.75 | 3 | |
| Terra Cotta | Prairie Grove | 1 | McHenry | 83 | 82 | | | 2 | 1.15 | 1 | 1.15 | | | 1.15 | 0.02 | 0.16 | 1 | 0.50 | | |
| Valley-Marina | Oswego | 1 | Kendall | 422 | 422 | | | 2 | 0.68 | 2 | 0.68 | | | 0.68 | 0.16 | 0.58 | | | | |
| Valley View | Glen Ellyn, Lombard & Milton Township | 1 | DuPage | 2,534 | 2,561 | 1 | 1.19 | 2 | 1.15 | 2 | 1.15 | | | 2.34 | 0.64 | 1.35 | 3 | 0.88 | 1 | |
| Waycinden | Des Plaines & Mt. Prospect | 1 | Cook | 733 | 742 | 1 | 1.58 | 2 | 2.29 | 2 | 2.29 | | | 3.87 | 0.55 | 0.79 | 2 | 0.82 | 3 | |
| West Suburban | Bolingbrook | 1 | Will | 17,963 | 9,882 | 1 | 10.20 | 17 | 13.97 | 16 | 13.97 | | | 24.17 | 5.38 | 10.72 | 10 | 9.88 | 3 | |
| Chicago Metro Division Totals | | 32 | 7 | 39,556 | 29,556 | 15 | 31.46 | 56 | 43.54 | 51 | 43.54 | 0 | 0.00 | 75.00 | 13.52 | 27.38 | 31 | 22.68 | 16 | 565 |
| EASTERN DIVISION | | | | | | | | | | | | | | | | | | | | |
| Champaign | Champaign & Urbana | 11 | Champaign-Douglas | 45,471 | 0 | 0 | 0.00 | 22 | 38.50 | 2 | 40.00 | 0 | 0.00 | 38.50 | 21.46 | 29.84 | 7 | 7.85 | 7 | 527 |
| Pontiac | Pontiac | 1 | Livingston | 4,221 | 0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 1 | 4.00 | 4.00 | 1.81 | 2.44 | 1 | 0.50 | 0 | 109 |
| Sterling | Sterling | 1 | Whiteside | 6,551 | 0 | 0 | 0.00 | 7 | 6.20 | 2 | 4.70 | 0 | 0.00 | 4.70 | 1.80 | 2.45 | 2 | 0.75 | 1 | 88 |
| Streator | Streator | 4 | LaSalle | 7,838 | 0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 1 | 6.00 | 6.00 | 2.54 | 3.69 | 1 | 1.00 | 0 | 63 |
| Eastern Division Totals | | 17 | 5 | 64,081 | 0 | 0 | 0.00 | 29 | 44.70 | 4 | 44.70 | 2 | 10.00 | 53.20 | 27.61 | 38.42 | 11 | 10.10 | 8 | 788 |
| NORTHERN DIVISION | | | | | | | | | | | | | | | | | | | | |
| Lincoln | Lincoln | 1 | Logan | 5,907 | 0 | 0 | 0.00 | 6 | 4.50 | 2 | 5.90 | 0 | 0.00 | 4.50 | 2.75 | 3.20 | 3 | 2.90 | 0 | 77 |
| Pekin | Pekin | 4 | Tazewell | 13,744 | 0 | 0 | 0.00 | 7 | 15.43 | 4 | 13.43 | 0 | 0.00 | 13.43 | 6.84 | 10.53 | 5 | 4.03 | 3 | 174 |
| Peoria | Peoria | 17 | Peoria | 50,042 | 0 | 0 | 0.00 | 13 | 23.70 | 3 | 23.70 | 1 | 15.00 | 38.70 | 20.78 | 32.86 | 9 | 16.01 | 8 | 648 |
| Northern Division Totals | | 22 | 3 | 69,693 | 0 | 0 | 0.00 | 26 | 43.63 | 9 | 43.03 | 1 | 15.00 | 56.63 | 30.37 | 46.59 | 17 | 22.94 | 11 | 900 |
| SOUTHERN DIVISION | | | | | | | | | | | | | | | | | | | | |
| Alton | Alton | 8 | Madison-Jersey | 18,157 | 0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 1 | 16.00 | 16.00 | 8.06 | 11.44 | 5 | 5.82 | 5 | 267 |
| Cairo | Cairo | 3 | Alexander | 1,417 | 0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 1 | 4.00 | 4.00 | 0.91 | 1.50 | 1 | 0.20 | 0 | 41 |
| Interurban | E.St. Louis, Granite City & Belleville | 42 | St. Clair-Monroe | 68,022 | 0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 2 | 68.60 | 68.60 | 45.14 | 56.64 | 13 | 18.51 | 10 | 1,033 |
| Southern Division Totals | | 53 | 5 | 87,596 | 0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 4 | 88.60 | 88.60 | 54.11 | 69.58 | 19 | 24.53 | 15 | 1,340 |
| TOTAL ILLINOIS-AMERICAN | | | | | | | | | | | | | | | | | | | | |
| | | 124 | 20 | 260,926 | 29,556 | 15 | 31.46 | 111 | 131.87 | 64 | 131.27 | 7 | 113.60 | 273.43 | 125.61 | 181.97 | 78 | 80.25 | 50 | 3,592 |

Notes:
PW=Purchased Water
WTF=Water Treatment Facility
SW=Surface Water
ADD=Average Daily Demand
MDD=Maximum Daily Demand
WRF=Water Reclamation Facility
ADF=Average Daily Flow
MDF=Maximum Daily Flow

(1) Regional Connections To The Metropolitan Wastewater Reclamation District of Greater Chicago (MWRDGC) are not metered and no flow information is provided.
(2) MDF data not available for Country Club and Rollins.
(3) Chicago-Metro Division does not inventory water mains or collection mains by district.

ILLINOIS-AMERICAN WATER COMPANY
SYSTEM DATA
June 30, 2002

Exhibit No. 2.1
Page 2 of 2

| | | | | WASTEWATER SYSTEM FACILITIES | | | | | | | | | |
|---|--|-----|-------------------|------------------------------|-------------------------|------------------------------|--------------------|-----------------------|----------------|-------------------|---------------|-----------------------------|--|
| DISTRICT | COMMUNITIES SERVED | | COUNTY | Regional Connections (1) | Regional Capacity (mgd) | Water Reclamation Facilities | WRF Capacity (mgd) | System Capacity (mgd) | 2001 ADF (mgd) | 2001 MDF (mgd)(2) | Collection | | |
| | Primary | No. | | | | | | | | | Lift Stations | Collection Main (miles) (3) | |
| CHICAGO METRO DIVISION | | | | | | | | | | | | | |
| Alpine Heights | Village of Orland Park | 1 | Will | 1 | 0.45 | | | 0.45 | | | | | |
| Arbury | Mokena & Arbury Hills Sub. | 2 | Will | | | 1 | 0.50 | 0.50 | 0.40 | 2.50 | | | |
| Arrowhead | Wheaton & Milton Township | 2 | DuPage | | | | | | | | | | |
| Central States | Joliet | 1 | Will | | | 1 | 0.40 | 0.40 | 0.02 | 0.10 | 1 | | |
| Chicago Suburban | Mt. Prospect & Prospect Heights | 2 | Cook | 8 | 21.39 | | | 21.39 | | | 5 | | |
| Country Club | Elmhurst | 1 | DuPage | 1 | 0.75 | | | 0.75 | 0.32 | | 1 | | |
| DuPage | Lisle & Lisle Township | 2 | DuPage | 2 | 0.90 | | | 0.90 | | | 2 | | |
| Fernway | Orland Park & Orland Hills | 1 | Cook | 2 | 3.65 | | | 3.65 | | | 1 | | |
| Hollis | Sandwich | 1 | Kendall | | | | | | | | | | |
| Liberty Ridge West | Wheaton & Winfield | 1 | DuPage | | | | | | | | | | |
| Liberty Ridge East | Wheaton | | DuPage | | | | | | | | | | |
| Lombard | Lombard & Villa Park | 2 | DuPage | | | | | | | | | | |
| Midwest Palos | Palos Township | 1 | Cook | | | | | | | | | | |
| Moreland | Norwood Township | 1 | Cook | 1 | 1.57 | | | 1.57 | | | | | |
| Nettle Creek | Morris | 1 | Grundy | | | 1 | 0.09 | 0.09 | 0.02 | 0.07 | 1 | | |
| Potter Golf/Sunset Manor/Forest Estates | Niles, Glenview & Rolling Meadows | 3 | Cook | 1 | 0.45 | | | 0.45 | | | | | |
| Ridgecrest | Morris | | Grundy | | | 1 | 0.10 | 0.10 | 0.06 | 0.28 | 1 | | |
| River Grange | St. Charles | 1 | Kane | | | 1 | 0.01 | 0.01 | 0.01 | 0.05 | 1 | | |
| Rollins/Elgin | Elgin | 1 | Kane | 1 | 0.45 | | | 0.45 | 0.04 | | | | |
| Santa Fe | Lemont & Woodridge | 2 | DuPage | | | 1 | 1.00 | 1.00 | 0.29 | 1.34 | 5 | | |
| Southwest Suburban | Homer Glen | 1 | Will | 2 | 1.47 | 3 | 2.35 | 3.82 | 2.40 | 8.94 | 21 | | |
| Terra Cotta | Prairie Grove | 1 | McHenry | | | 1 | 0.10 | 0.10 | 0.01 | 0.05 | 1 | | |
| Valley-Marina | Oswego | 1 | Kendall | | | 1 | 0.25 | 0.25 | 0.25 | 0.56 | 2 | | |
| Valley View | Glen Ellyn, Lombard & Milton Township | 1 | DuPage | 5 | 6.97 | | | 6.97 | 1.12 | 4.42 | | | |
| Waycinden | Des Plaines & Mt. Prospect | 1 | Cook | 2 | 14.82 | | | 14.82 | | | 1 | | |
| West Suburban | Bolingbrook | 1 | Will | 3 | 15.41 | | | 15.41 | 2.67 | 7.49 | 8 | | |
| Chicago Metro Division Totals | | 32 | 7 | 29 | 68.28 | 11 | 4.80 | 73.08 | 7.61 | 25.78 | 51 | 366 | |
| EASTERN DIVISION | | | | | | | | | | | | | |
| Champaign | Champaign & Urbana | 11 | Champaign-Douglas | | | | | | | | | | |
| Pontiac | Pontiac | 1 | Livingston | | | | | | | | | | |
| Sterling | Sterling | 1 | Whiteside | | | | | | | | | | |
| Streator | Streator | 4 | LaSalle | | | | | | | | | | |
| Eastern Division Totals | | 17 | 5 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0 | |
| NORTHERN DIVISION | | | | | | | | | | | | | |
| Lincoln | Lincoln | 1 | Logan | | | | | | | | | | |
| Pekin | Pekin | 4 | Tazewell | | | | | | | | | | |
| Peoria | Peoria | 17 | Peoria | | | | | | | | | | |
| Northern Division Totals | | 22 | 3 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0 | |
| SOUTHERN DIVISION | | | | | | | | | | | | | |
| Alton | Alton | 8 | Madison-Jersey | | | | | | | | | | |
| Cairo | Cairo | 3 | Alexander | | | | | | | | | | |
| Interurban | E.St. Louis, Granite City & Belleville | 42 | St. Clair-Monroe | | | | | | | | | | |
| Southern Division Totals | | 53 | 5 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0 | |
| TOTAL ILLINOIS-AMERICAN | | 124 | 20 | 29 | 68.28 | 11 | 4.80 | 73.08 | 7.61 | 25.78 | 51 | 366 | |

Notes:

PW=Purchased Water

WTF=Water Treatment Facility

SW=Surface Water

ADD=Average Daily Demand

MDD=Maximum Daily Demand

WRF=Water Reclamation Facility

ADF=Average Daily Flow

MDF=Maximum Daily Flow

(1) Regional Connections To The Metropolitan Wastewater Reclamation District of Greater Chicago (MWRDGC) are not metered and no flow information is provided.

(2) MDF data not available for Country Club and Rollins.

(3) Chicago-Metro Division does not inventory water mains or collection mains by district.

ILLINOIS COMMERCE COMMISSION

EXHIBIT NO. 3.0

DIRECT TESTIMONY OF

MARK L. JOHNSON

ILLINOIS-AMERICAN WATER COMPANY

**DIRECT TESTIMONY
OF
MARK L. JOHNSON**

Exhibit No. 3.0

1 **Q. Please state your name.**

2 A. Mark L. Johnson

3 **Q. Please state your business address.**

4 A. 100 North Water Works Drive, Belleville, Illinois 62223.

5 **Q. By whom are you employed and in what capacity?**

6 A. I am employed by Illinois-American Water Company (“Illinois-American” or “Company”) as
7 Vice President-Engineering.

8 **Q. Please summarize your higher education experience.**

9 A. I obtained a B.S. Degree in Civil Engineering from Worcester Polytechnic Institute in 1976. I
10 earned an M.S. Degree in Environmental Engineering from the University of Maine in 1977. In
11 1996, I successfully completed the Utility Executive Management Program at the University of
12 Michigan Business School.

13 **Q. Please summarize your employment experience.**

14 A. I joined Bridgeport Hydraulic Company (“BHC”) in 1978 as an Engineer. In 1979, I became
15 Superintendent-System Operations for BHC. In 1983, I became Director-Engineering. In
16 1987, I was made Vice President-Engineering. In 1990, I became President and Chief
17 Operating Officer of Stamford Water Company, a subsidiary of BHC, and also Vice President-
18 Environmental Management of BHC.

1 From April 1, 1993 until September 1, 1999, I served as Vice President-Production for
2 Northern Illinois Water Corporation ("NIWC"). On September 1, 1999, I became Vice
3 President-Engineering for Illinois-American.

4 **Q. Are you a registered professional engineer?**

5 A. Yes, in the states of Illinois and Connecticut.

6 **Q. Are you a member of any professional organizations?**

7 A. I am a member of the American Water Works Association and a diplomate of the American
8 Academy of Environmental Engineers.

9 **Q. Please summarize your responsibilities as Vice President-Engineering of Illinois-**
10 **American.**

11 A. I am responsible for the planning, design and construction of water, wastewater and general
12 facilities for the Company. This work includes:

- 13 • Administering the capital investment program consisting of an average of 20 to 40 projects
14 annually with individual budgets greater than \$100,000, and typical total yearly budgets
15 ranging from approximately \$10 million to \$40 million;
- 16 • Supervising a staff of 13 engineers and technicians;
- 17 • Utilizing knowledge of state and federal regulatory requirements to ensure compliance with
18 environmental requirements;
- 19 • Coordinating the procurement of all project design and construction services, including
20 contract administration, requests for proposals, and scope development; and

- Providing comprehensive system planning for 5, 10 and 15-year intervals for use in projecting facility needs and expansion requirements.

Q. Have you testified before this Commission in other proceedings?

A. Yes. I have testified in several cases involving NIWC, including rate cases and certificate cases. I have testified in Illinois-American's merger case with United Water Illinois and the Illinois-American 2000 rate case.

Q. Have you testified before any other regulatory commissions?

A. Yes. I have testified before the Connecticut Public Utilities Commission.

Q. As Vice President-Engineering of the Company, are you generally familiar with the business, facilities and operations of the Company in each of its divisions?

A. Yes.

Q. What is the purpose of your testimony?

A. I will describe steel structure painting needs of the Company, describe the use of temporary reverse osmosis equipment to remove nitrates at the Streator District in 2001 and describe the major capital projects completed in 2001 and planned for 2002 and 2003.

STEEL STRUCTURE PAINTING

Q. Please describe the Company's steel structures.

A. The Company has 167 steel structures that are utilized for water treatment, backwash storage and distribution storage. The total capacity of the steel structures is 149 million gallons.

1 **Q. Please describe the Company's steel structure painting program.**

2 A. Modern paint systems generally provide an average service life of 15 years. This requires
3 approximately 10 steel structures to be painted each year. Illinois-American has a
4 comprehensive five-year painting schedule as shown in Exhibit No. 3.1. The Company is in the
5 process of inspecting all the steel structures to develop a comprehensive database, painting
6 priorities and a long-term steel structure painting program. This should be completed at the end
7 of 2003.

8 **Q. What are the current steel structure painting costs and how much should be expensed**
9 **each year?**

10 A. Using average steel structure painting costs for 2000, 2001 and 2002, the average cost (interior
11 and exterior) per gallon of steel structure capacity is \$0.24 per gallon. The average size of
12 Illinois-American's steel structures is 892,216 gallons. Assuming 10 steel structures are painted
13 each year, the annual average cost is \$2,141,318. This is the amount that should be expensed
14 each year.

15
16 **TEMPORARY REVERSE OSMOSIS NITRATE REMOVAL TREATMENT**

17 **STREATOR WATER TREATMENT FACILITY-2001**

18
19 **Q. Why was temporary reverse osmosis treatment required in 2001 at the Streator Water**
20 **Treatment Facility (WTF)?**

21 A. The source of supply for the Streator WTF is the Vermilion River. The Vermilion River has a
22 long history of high nitrates related to agricultural fertilizer runoff. Illinois-American has been
23 successful in dealing with the nitrate problem through blending and watershed management.

1 When nitrate levels in the Vermilion River are low, water is taken directly from the river to the
2 Streator WTF and the side-channel reservoir is filled. When nitrate levels in the Vermilion River
3 are high, low nitrate water stored in the 237 million gallon side-channel reservoir is blended with
4 river water to meet the 10 mg/l standard. In late 2000 and 2001, nitrate levels in the Vermilion
5 River were unusually high and the low nitrate water in the side-channel reservoir was depleted.
6 Temporary reverse osmosis treatment was rented and placed in service for approximately 40
7 days until the river nitrate levels fell to a safe level. The cost of this temporary treatment was
8 \$497,000.

9 **Q. How is Illinois-American dealing with the nitrate problem?**

10 A. In 1993, NIWC performed an ion-exchange nitrate removal treatment pilot study, looked for an
11 alternative groundwater source in the Ticona Aquifer, studied expansion of the side-channel
12 reservoir and examined solving the problem at the source through watershed management. The
13 least cost option was watershed management and the Vermilion Watershed Task Force was
14 created. This group has been very active in promoting best management practices for fertilizer
15 use in the watershed and was successful in keeping nitrate levels down for seven years. It is
16 now clear, however, that voluntary watershed action is not sufficient and permanent nitrate
17 removal treatment will be required at the Streator WTF.

18 **Q. Why was reverse osmosis treatment utilized in 2001?**

19 A. The equipment was readily available and this type of treatment had not been piloted in 1993.
20 The Company wanted to make sure that all viable treatment techniques were examined in the
21 field, as permanent nitrate removal equipment might be required.

22 **Q. How should the \$497,000 cost be treated from an accounting standpoint?**

A. Mr. Harris will provide detailed testimony on this issue but the accounting treatment should be the same as that used for all the 1993 nitrate issue alternatives discussed earlier.

MAJOR 2001 CAPITAL PROJECTS

Q. What major Capital Projects were completed in 2001?

A. The major 2001 Capital Projects are described as follows:

- **Belleville Rechlorination Station (Interurban-\$256,887)**- This project included the construction of a new rechlorination station at the Yorktown Elevated Tank site. This facility provides seasonal rechlorination for the northeastern portion of the Belleville distribution system, particularly the Village of Shiloh and Scott Air Force Base. The project will improve water quality and treatment system reliability.
- **Prospect Main (Peoria \$506,172)**-This project included the installation of 4,000 feet of 20" and 24" water main to improve flow out of the San Koty Station and improve distribution pressure/flow in the Peoria High Service Area.
- **Well 66 & Supply Main (Champaign-\$587,451)**-This project included the installation of a new 3 million gallon per day (mgd) well (No.66) and 2,600 feet of 20" supply main. The addition of Well 66 provides the Champaign District with a total well yield of 38.5 mgd (35.0 mgd with the largest well out of service), which will allow the system to meet peak demands.
- **East Water Treatment Facility SCADA (Champaign-\$1,334,663)**-This project included the installation of a new Intelution-based SCADA system which automates the

entire facility. The work included the installation 19 automatic control valves, new sensing devices, control wiring, Programmable Logic Controller (PLC) and personal computer installation and programming and two 6 mgd high service pumps. The project replaced outdated equipment, improves system reliability and improves operating efficiency.

- **Newton Township Main Extension (Streator-\$258,297-net)**- This project included the installation of 14,847' of a combination of 8" and 6" main to serve 51 residents with poor individual wells in Newtown Township. The project is partially funded by a \$400,000 Community Development Assistant Program (CDAP) grant obtained by Newtown Township.
- **PAC System Replacement (Pontiac-\$182,067)**-This project included the installation of a new powdered activated carbon (PAC) storage and feed system at the Pontiac WTF. This completely enclosed silo system improves chemical storage/handling and safety.
- **Woodridge Booster Station and Tank (West Suburban/Santa Fe-\$3,497,592)**-This project included the construction of a 15.0 mgd booster pumping station and a 5.0 million gallon water storage tank. These facilities receive and deliver Lake Michigan water to the West Suburban and Santa Fe Districts and the Village of Bolingbrook.
- **West Suburban Water Main Improvements (West Suburban-\$6,322,603)**-This project included the installation of approximately 20,000' of 36", 7,500' of 20", 1,000' of 16" and 4,200' of 12" water main in the West Suburban District. These new mains facilitate delivery of Lake Michigan water to the West Suburban District and the Village of Bolingbrook.
- **Homer Booster Station and Tank (Southwest Suburban-\$2,483,706)**- This project included the installation of a new 5.0 mgd booster pumping station and a 2.0 million gallon

water storage tank. These facilities are required to deliver Lake Michigan water to the Southwest Suburban District.

- **Derby Meadows Water Reclamation Facility (WRF) Expansion (Southwest Suburban-\$1,099,067)**-The Derby Meadows WRF was expanded from an average day capacity of 0.6 mgd to 0.9 mgd. This expansion provides needed sewage treatment capacity in the Southwest Suburban District.
- **Oak Valley WRF Excess Flow Clarifier (Southwest Suburban-\$1,725,226)**-This project included the installation of a 70' diameter clarifier and associated pumping and piping improvements. This project has increased the wet weather handling capacity of the facility. The potential of sewage backup in customer's homes during wet weather has been reduced.
- **Meter Reading Equipment (Corp-\$511,200)**-This project included the purchase and deployment of new Schlumberger meter reading equipment and software throughout the state. All Illinois-American districts now have consistent meter reading equipment and software.

MAJOR 2002 CAPITAL PROJECTS

Q. Please describe major Capital Projects that will be completed in 2002.

A. The major 2002 Capital Projects are described as follows:

- 1 • **Town Hall Road/59th Street Main & Booster-Phase I (Interurban-\$2,124,428)**- This
2 first phase of the project includes the installation of 12,800' of 24" water main and a new
3 booster pump station. This project will enhance distribution pressure/flow in the southern
4 portion of the Belleville system and will enhance reliability, distribution pressure/flow to the
5 communities of Millstadt, Waterloo and Columbia.
- 6 • **I-74 Relocation-Phase I (Peoria-\$2,500,000)**- This is a two-year construction project
7 involving renovation and improvements to a 13-mile stretch of I-74 through the City of
8 Peoria. This complex relocation project requires the elimination of nine (9) of the existing
9 fourteen (14) water main crossings of I-74, rebuilding the remaining five (5) crossings,
10 installation of parallel distribution reinforcement piping and miscellaneous side street
11 relocations.
- 12 • **Standby Power Improvements-Phase I (Peoria-\$400,000)**- This project includes the
13 installation of standby power units at the San Koty Station (1,000 KW) and San Koty
14 Wells No. 16 & 18 (250 KW). The San Koty projects will be completed and placed in
15 service in 2002. This project will provide power reliability for the Peoria system.
- 16 • **Streator WTF Improvements-Phase I-Nitrate Removal Facilities (Streator-**
17 **\$1,300,000)**- This project includes the installation of ion exchange nitrate removal facilities at
18 the Streator WTF. The ion exchange nitrate removal equipment will be completed and in
19 service by June 1, 2002. These facilities are required to remove increasing levels of nitrates
20 related to agricultural runoff in the Vermilion River watershed. The ion exchange nitrate
21 removal facility will increase annual operating and maintenance costs for this facility by
22 \$46,901 (assuming 60 days of service).

- 1 • **Sterling East WTF Improvements-Phase I-Radium Removal Facilities (Sterling-**
2 **\$2,500,000)**-This project includes the installation of radium removal facilities at the Sterling
3 East WTF. The radium removal facilities are required to remove radium from the source
4 wells, which have radium levels approaching the 5.0 picocuries per liter (pCi/L) Maximum
5 Contaminant Level (MCL). Illinois-American has performed pilot testing of Reverse
6 Osmosis (RO) and Radium Selective Adsorption (RSA) treatment options. Ion Exchange
7 (IX) treatment is also an option, which does not require pilot testing. RO and IX appear to
8 be the most viable treatment options, with waste disposal the critical element. RO is a
9 proven technology for radium removal and is most probable for this installation. The RO
10 radium removal facility will increase annual operating and maintenance costs for this facility
11 by \$138,743. The radium removal equipment will be completed and in-service in 2002.
- 12 • **Bolingbrook 20" Transmission Main-Phase I (West Suburban-\$750,000)**-This two-
13 year project includes the installation of 12,000' of 20" transmission main in west
14 Bolingbrook to improve the availability and reliability of the Lake Michigan water supply to
15 the rapidly developing west side of Bolingbrook. 40% of the transmission main will be
16 completed and placed into service in 2002.
- 17 • **Customer Service Software (Corp-\$4,563,594)**-This project includes the purchase and
18 installation of new Enhanced Customer Information System (ECIS) software by Orcom.
19 This software will allow integration of the Illinois-American customer service system into the
20 American Water Works Company national call center.

MAJOR 2003 CAPITAL PROJECTS

Q. Please describe major Investment Projects that will be completed in 2003.

A. The major 2003 Investment Projects are described as follows:

- **Town Hall Road/59th Street Main & Booster-Phase II (Interurban-\$1,775,572)**- This second phase of the project includes the installation of 8,200' of 24" water main. This project will enhance distribution pressure/flow in the southern portion of the Belleville system and will enhance reliability, distribution pressure/flow to the communities of Millstadt, Waterloo and Columbia.
- **Construct Well No. 20 (Lincoln-\$325,000)**-This project includes the installation of a new 1 mgd well at the South Wellfield in Lincoln. This project will increase the reliable well capacity to 4.2 mgd and allow the system to meet future peak demands.
- **I-74 Relocation-Phase II (Peoria-\$1,118,320)**-This is a continuation of the two-year construction project involving the renovation and improvements to a 13-mile stretch of I-74 through the City of Peoria which is being commenced in 2002.
- **Standby Power Improvements-Phase II (Peoria-\$290,000)**-This project includes the installation of a standby power unit at the Dodge Street Station (500 KW). The standby power unit will be placed in service by June 1, 2003. This project will provide power reliability for the Peoria system.
- **West WTF Lime Equipment Improvements (Champaign-\$228,000)**-This project includes the replacement of two sets of lime feed equipment at the West WTF in Champaign. This project is part of a long term lime feed replacement program.

- 1 • **Streator WTF Improvements-Phase II-Clearwell, Pump Station and Chemical**
2 **Storage/Feed Facilities (Streator-\$2,850,000)**-This project includes the installation of a
3 new 350,000 gallon clearwell, high service pump station and chemical storage/feed
4 improvements at the Streator WTF. The clearwell, pump station and chemical storage/feed
5 facilities will be completed and in-service by June 1, 2003. These facilities will dramatically
6 improve clearwell / pumping reliability and replace aged equipment. The project also is
7 expected to enable use of alternative disinfectants, which should help to assure continued
8 compliance with Total Trihalomethanes (TTHM) and Haloacetic Acids (HAA5)
9 requirements. The improvements to the chemical storage/ feed equipment will help to
10 maintain continued safety and reliability.
- 11 • **Sterling East WTF Improvements-Phase II-Chemical Storage/Feed Facilities**
12 **(Sterling-\$1,700,000)**-This project includes the installation of chemical feed/ storage
13 improvements at the Sterling East WTF. The chemical storage/feed facilities will be
14 completed and placed in service by June 1, 2003. The improvements to the chemical
15 storage/ feed equipment will help to maintain continued safety and reliability.
- 16 • **Bolingbrook 20" Transmission Main-Phase II (West Suburban-\$1,210,000)**-This
17 project includes the installation of 12,000' of 20" transmission main in west Bolingbrook to
18 enhance the availability and reliability of the Lake Michigan water supply to the rapidly
19 developing west side of Bolingbrook. 60% of the project will be completed and placed into
20 service in 2003.
- 21 • **Bolingbrook West Standpipe and Booster (\$1,320,000)**-This project includes the
22 construction of a new 3 million gallon standpipe and booster station in the West Suburban
23 District. This project will address the shortage of storage and lack of storage dispersion

1 within this rapidly growing system. The standpipe and booster will be placed into service by
2 June 1, 2003.

- 3 • **Sewer Lining/Manhole Replacement (Chicago Metro-\$402,500)**-This project
4 includes the investigation and relining of deteriorated sewers and manhole replacement in
5 various districts in the Chicago Metro Division. This is part of a long-term program that will
6 enhance sewer reliability.

- 7 • **Chickasaw WRF Influent Screen Replacement (Southwest Suburban-\$270,000)**-
8 This project includes the replacement of aged influent screens at the Chickasaw WRF. This
9 project will enhance pre-treatment and reliability.

10 **Q. Does this conclude your testimony?**

11 **A. Yes.**

ILLNOIS-AMERICAN WATER COMPANY
STEEL STRUCTURE PAINTING 2003-2007

Exhibit No. 3.1

Page 1 of 1

| Steel Structure | Tank Type | District | 2003 | 2004 | 2005 | 2006 | 2007 | Total |
|----------------------------------|-----------|----------|-------------|-------------|-------------|-------------|-------------|--------------|
| Comprehensive Inspections | | State | \$200,000 | | | | | \$200,000 |
| Cardinal Street | Standpipe | AL | \$400,000 | | | | | \$400,000 |
| Liberty East Hydro Tank | Hydro. | CM | \$25,000 | | | | | \$25,000 |
| Liberty West Hydro Tank | Hydro. | CM | \$25,000 | | | | | \$25,000 |
| Arrowhead Elevated Tank | Elevated | CM | \$110,000 | | | | | \$110,000 |
| Bollingbrook Well #10 | Elevated | CM | \$185,000 | | | | | \$185,000 |
| Peoria Route 116 | Elevated | PO | \$330,000 | | | | | \$330,000 |
| Cairo Washwater | Elevated | CA | \$120,000 | | | | | \$120,000 |
| Granite City Washwater | Standpipe | IN | \$90,000 | | | | | \$90,000 |
| Chickasaw Well #4 | Hydro. | CM | \$167,000 | | | | | \$167,000 |
| Santa Fe Well #1 | Elevated | CM | \$110,000 | | | | | \$110,000 |
| Granite City Elevated | Elevated | IN | \$400,000 | | | | | \$400,000 |
| West Suburban Tank B-Well #8 | Elevated | CM | | \$150,000 | | | | \$150,000 |
| Sterling WTF Backwash | Reservoir | SL | | \$30,000 | | | | \$30,000 |
| Sterling WTF Filters | Filter | SL | | \$15,000 | | | | \$15,000 |
| Rollins Hydro Tank | Hydro. | CM | | \$25,000 | | | | \$25,000 |
| Chicago Suburban Well#4 | Reservoir | CM | | \$162,500 | | | | \$162,500 |
| Chicago Suburban Well #2 | Reservoir | CM | | \$40,000 | | | | \$40,000 |
| Tolono | Reservoir | CP | | \$285,000 | | | | \$285,000 |
| Grand Blvd. 1 | Reservoir | PO | | \$750,000 | | | | \$750,000 |
| Streator Backwash | Elevated | SR | | \$150,000 | | | | \$150,000 |
| WTF 4 Superstructure | Reservoir | CP | | \$25,000 | | | | \$25,000 |
| WTF E6 Superstructure | Reservoir | CP | | \$25,000 | | | | \$25,000 |
| Pontiac WTF Precipator 2 & 3 | Reservoir | PT | | \$50,000 | | | | \$50,000 |
| Camelot Elevated | Elevated | PO | | \$225,000 | | | | \$225,000 |
| Sterling WTF Detention | Reservoir | SL | | \$30,000 | | | | \$30,000 |
| Pontiac WTF Filter #6 | Filter | PT | | \$30,000 | | | | \$30,000 |
| Fernway Tank A | Elevated | CM | | \$110,000 | | | | \$110,000 |
| Waycinden Tank B-Well #2 | Reservoir | CM | | \$75,000 | | | | \$75,000 |
| Bollingbrook Tank 2-Well #6 | Elevated | CM | | | \$150,000 | | | \$150,000 |
| Peoria WTF Washwater 1 | Standpipe | PO | | | \$245,000 | | | \$245,000 |
| ESL WTF Aldrich Units 1-4 | Reservoir | IN | | | \$225,000 | | | \$225,000 |
| ESL WTF Washwater | Standpipe | IN | | | \$100,000 | | | \$100,000 |
| ESL WTF Aldrich Units 5-8 | Filter | IN | | | \$500,000 | | | \$500,000 |
| French Village #1 | Reservoir | IN | | | \$503,000 | | | \$503,000 |
| Champaign Elevated | Elevated | CP | | | \$350,000 | | | \$350,000 |
| Waycinden Tank A-Well #3 | Reservoir | CM | | | \$160,000 | | | \$160,000 |
| Country Club Tank | Reservoir | CM | | | | \$100,000 | | \$100,000 |
| St. Joseph | Elevated | CP | | | | \$100,000 | | \$100,000 |
| WTF Clarifier and Flocculator #2 | Reservoir | PO | | | | \$475,000 | | \$475,000 |
| Harold St. | Standpipe | AL | | | | \$443,000 | | \$443,000 |
| French Village #2 | Reservoir | IN | | | | \$500,000 | | \$500,000 |
| Peoria WTF Washwater #2 | Standpipe | PO | | | | \$207,000 | | \$207,000 |
| West 7th | Reservoir | SL | | | | \$125,000 | | \$125,000 |
| West Plant Backwash | Elevated | CP | | | | \$100,000 | | \$100,000 |
| San Koty Clearwell | Reservoir | PO | | | | \$211,000 | | \$211,000 |
| San Koty Contact | Standpipe | PO | | | | | \$127,000 | \$127,000 |
| Deepwell No. 1 | Reservoir | IN | | | | | \$452,700 | \$452,700 |
| East Plant Basins | Reservoir | CP | | | | | \$250,000 | \$250,000 |
| Pfeffer Road Reservoir | Reservoir | CP | | | | | \$200,000 | \$200,000 |
| Grand Blvd. 2 | Reservoir | PO | | | | | \$815,500 | \$815,500 |
| Chouteau Grit | Standpipe | IN | | | | | \$275,000 | \$275,000 |
| TOTAL | | | \$2,162,000 | \$2,177,500 | \$2,233,000 | \$2,261,000 | \$2,120,200 | \$10,953,700 |

ILLINOIS COMMERCE COMMISSION

EXHIBIT NO. 4.0

DIRECT TESTIMONY OF

RONALD D. STAFFORD

ILLINOIS-AMERICAN WATER COMPANY

**DIRECT TESTIMONY
OF
RONALD D. STAFFORD**

EXHIBIT NO. 4.0

1 **Q. Please state your name.**

2 A. Ronald D. Stafford.

3 **Q. Please state your business address.**

4 A. 300 North Water Works Drive, Belleville, Illinois 62223.

5 **Q. By whom are you employed and in what capacity?**

6 A. I am employed by American Water Works Service Company, Inc. ("Service Company"), an
7 affiliate of Illinois-American, as Director of Rates and Planning for Illinois-American Water
8 Company ("Illinois-American" or "Company"). I also serve as Assistant Treasurer and
9 Assistant Comptroller of Illinois-American.

10 **Q. Please summarize your higher education experience.**

11 A. I am a graduate of Ball State University with a Bachelor of Science Degree in Accounting. I
12 also have earned a Masters Degree in Business Administration, with concentrations in
13 Management and Finance from Southern Illinois University at Edwardsville.

14 **Q. Are you a Certified Public Accountant?**

15 A. Yes. I am licensed in the State of Illinois.

16 **Q. Have you participated in additional educational activities?**

17 A. Yes. I have attended various seminars, including the Seminar on Water Utility Regulation
18 sponsored by the National Association of Regulatory Utility Commissioners. I also have
19 participated in continuing education programs sponsored by Service Company.

1 **Q. Please summarize your employment experience.**

2 A. I began my employment with the Service Company in Richmond, Indiana as an Accountant in
3 September 1981. In May 1983, I was promoted to the position of Rate Analyst. In June
4 1986, I was promoted to the position of Senior Rate Analyst. In May 1990, I was promoted
5 to the position of Revenue Requirement Specialist and remained in that position with the Service
6 Company until my promotion to Assistant Director of Rates and Revenue for Illinois-American
7 in October 1993. I was named an Assistant Treasurer of Illinois-American in December 1993.
8 In January 1996, I was promoted to the position of Director of Rates and Revenue. In 2000, I
9 became an employee of the Service Company, as Director of Rates and Revenue for Illinois-
10 American. Effective January 1, 2002, my title changed to Director of Rates and Planning. On
11 July 24, 2002, I also was elected as an Assistant Comptroller of Illinois-American.

12 **Q. Have you previously testified before this Commission in other proceedings?**

13 A. Yes. I have testified on behalf of Illinois-American in numerous prior rate cases, certificate
14 cases, and merger cases.

15 **Q. Have you testified before any other regulatory commissions?**

16 A. Yes. I have testified before the Iowa Utilities Board, the Missouri Public Service Commission
17 and the Public Utilities Commission of Ohio.

18 **Q. Please summarize your responsibilities as Director of Rates and Planning.**

19 A. My responsibilities primarily involve the preparation and presentation of applications for rate
20 adjustments and other matters with the Illinois Commerce Commission (the "Commission"). I
21 also am responsible for budget preparation and financial analysis.

1 **Q. Are you generally familiar with the business, facilities and the operations of the**
2 **Company in each of its divisions?**

3 A. Yes.

4 **Q. Are you generally familiar with the books and records of the Company?**

5 A. Yes.

6 **FUTURE TEST YEAR PROJECTIONS**

7 **Q. What test year has the Company proposed in this proceeding?**

8 A. As Mr. Ruckman has testified, the Company is proposing, and has presented its schedules
9 using, a future test year comprising the twelve months ending December 31, 2003. The
10 Company also is presenting, where appropriate, information for the historic years comprising the
11 twelve months ending December 31, 2000 and December 31, 2001 and the current year
12 comprising the twelve months ending December 31, 2002.

13 **Q. How were the future test year projections developed?**

14 A. The projections initially were developed primarily by personnel at each district office and each
15 of the Division and State Corporate offices (each of which is individually referred to as
16 “business center”). The responsibility for each department’s projection within the business
17 center rests with the department head. Recent historical experience is used, usually from one to
18 five years, with appropriate adjustments for known or projected changes. Where necessary
19 and possible, contacts are made by local and corporate management personnel with suppliers of
20 goods and services to confirm estimates. The projections developed by the separate
21 departments are consolidated and reviewed by each business center’s management staff prior to

1 submission to the Company's corporate office. With respect to capital investment projections,
2 all proposed expenditures are supported by documentation which defines the scope of the
3 work, reports when funds are required, justifies the use of Company resources, explains the
4 urgency and adequacy of the proposed projects, outlines adverse effects of not accomplishing
5 the proposed work, and provides detailed cost estimates. Capital investment projections are
6 the outgrowth of operating experience and analysis of investments required for providing a
7 continuously acceptable level of water service.

8 The Company's Corporate Office staff assists with and coordinates the development of the
9 projections. The Corporate Office staff also prepares the projections of corporate items such
10 as state and federal income tax, interest expense, and preferred and common dividends. The
11 projections are then presented to senior management for review, and changes are made as
12 appropriate. The Company's projections are then presented to the Company President for
13 review and approval.

14 **Q. Has the Company submitted the "G" schedules required in Subpart J of the proposed**
15 **revised Standard Filing Requirements applicable to this case?**

16 A. Yes. These schedules are contained in Exhibit No. 9.0.

17 **Q. Did you prepare, or caused to be prepared under your direction and supervision, these**
18 **"G" schedules?**

19 A. Yes.

20 **Q. Please generally describe these schedules.**

21 A. These schedules provide information in support of the selection of a future test year.

1 **Q. Were any adjustments made to the 2003 projections described above in developing the**
2 **Company's exhibits?**

3 A. Yes, in developing the test year operating income statement at present rates, adjustments to the
4 2003 projection were made to reflect appropriate ratemaking treatment of certain items.

5 **Q. How does the Company assure that costs are maintained within approved projections?**

6 A. All capital expenditures and certain expenditures for operations and maintenance projects are
7 supported by work orders approved by the division managers. The scope of the work and the
8 cost estimate described in the work order must conform with the description contained in the
9 approved projections. Purchase orders are issued for materials, supplies, equipment, and
10 services described in the work order and authority for approval is conditioned upon their
11 conformity with the work order. With respect to construction projects, detailed cost analyses
12 are prepared as the work progresses and the project status is reviewed periodically with
13 respect to schedule, cost, and quality. Post-completion reviews are prepared to compare
14 actual costs and benefits with the original plans. A similar process is followed for routine
15 expenditures and other expenditures of minor magnitude except that the control point is the
16 detailed schedule that supports the projection rather than a specific work order. A monthly
17 report of operations is prepared that describes the Company's accomplishments and compares
18 projections to actual results. At least twice each year, the Company's officers and managers
19 meet to review progress. Additionally, on a periodic basis, the Company's officers meet to
20 compare projections to actual results and to review progress. Quality control reports, physical
21 inventories, internal audits and construction inspection reports are key elements of the control
22 process.

1 **Q. In your opinion, are the 2003 projections reasonable and reliable?**

2 A. Yes.

3 **Q. What is the basis of your opinion?**

4 A. The 2003 projections were developed in accordance with the “Guide for Prospective Financial
5 Information” (1999) issued by the American Institute of Certified Public Accountants. In
6 Exhibit 4.1, which also is Schedule G-2, the Company has submitted the opinion of
7 PricewaterhouseCoopers, certified public accountants, that the preparation and presentation of
8 the projections comply with the Guide. Furthermore, the projections are reasonable, reliable,
9 and were made in good faith. All of the basic assumptions used in preparing the projections are
10 reasonable, evaluated and justified in the exhibits, testimony and workpapers supporting this
11 filing to allow the Commission Staff and any intervenors to test the appropriateness of the
12 projections. The assumptions and methodologies used in developing the projections are the
13 same as those reflected in the 2003 projections prepared for the Company’s management. The
14 2003 projections prepared do not reflect the effect of the rate increase proposed in this
15 proceeding. The accounting treatment which has been applied to anticipated events and
16 transactions in the projections is the same as the accounting treatment to be applied in recording
17 the events once they have occurred.

18 **Q. Have you made a comparison of prior years projected data with actual data for those**
19 **years to verify the reliability and accuracy of the Company’s projections?**

20 A. Yes. Schedule G-1 presents a comparison of projections of revenues, operating expenses and
21 utility operating income to actual revenues, operating expenses, and utility operating income for
22 each of the years 1999 through 2001. Schedule G-1 also presents a comparison of projected to

1 actual capital investments for the same years. For these years, the overall percentage difference
2 between actual and projected revenues was only 0.9%. The overall percentage difference
3 between actual and projected operating expenses was only 3.2%. Actual capital additions
4 varied from projected capital investments by 3.3%. The differences between projected and
5 actual data shown on the Schedule are very small and demonstrate the accuracy and reliability
6 of the Company's projections.

7 **Q. Does Schedule G-5 summarize the procedures and major assumptions used by the**
8 **Company to prepare the test year 2003 operating and investment projections?**

9 A. Yes. Schedule G-5 also is Exhibit 4.2.

10 **Q. Please describe the remaining G Schedules.**

11 A. Schedule G-3 is a statement of Assumptions used in the Forecast; Schedule G-4 is a Statement
12 of Accounting Treatment; Schedule G-6 is a schedule identifying inflation rates applied in
13 developing test year projections; Schedule G-7 is a schedule showing Proration of Accumulated
14 Deferred Income Taxes; Schedule G-8 shows Actual Gross Additions and Retirements
15 Compared to Original Budget; Schedule G-9 shows a Comparison of Budgeted Non-Payroll
16 Expense to Actual; Schedule G-10 shows Budgeted Payroll Expense compared to actual;
17 Schedule G-11 shows Budgeted Number of Employees; Schedule G-12 shows Forecasted
18 Property Taxes; Schedule G- 13 shows a Comparison of Actual Financial Results to the
19 Original Approved Forecast for Each of the Past Twelve Months; and Schedules G-15 through
20 G-18 provide an Income Statement, Balance Sheet, Statement of cash flows, and Statement of
21 retained earnings, respectively .

RATE DESIGN

Q. How were the proposed rates designed?

A. The proposed rates are based upon across-the-board revisions to all rates for all Districts for which a rate increase is proposed in accordance with revenue requirements applicable to each District. The Company has selected this approach to: improve communications with customers, enhance customer understanding, reduce rate case expenses, minimize customer impacts, and simplify administration. In addition, current rates for most Districts are based on cost of service studies performed only three years ago.

Q. Has the Company submitted a cost of service study as referenced in Schedule E-7, Subpart H, of the proposed revised Standard Filing Requirements applicable to this case.

A. No. As Mr. Rumer has testified, the requirement is waived because the Company has provided data to enable Staff to perform a cost of service study.

Q. Is the Company continuing its single-tariff pricing?

A. Yes. The use of a single, or uniform, rate tariff applicable to all districts in the Southern Division was approved by the Commission in Docket No. 92-0116. In Docket No. 95-0076, the Commission approved the proposal of the Company and Staff to begin movement to include the Peoria District in the single-tariff pricing for the Southern Division. That movement was continued in the Company's most recent prior rate case, Docket No. 97-0102. In Docket 00-0340, Streator District and the Pontiac Districts were added to single-tariff pricing, with gradual movement towards uniform rates. In the present case, the Southern Division and the Peoria,

1 Streator, and Pontiac Districts remain in single-tariff pricing. For the Streator District, the
2 Company is proposing the customer charge and volumetric rates as applicable to the Southern
3 Division.

4 **Q. Does the Company propose to include any additional operating districts in single-tariff**
5 **pricing?**

6 A. No. The Chicago Metro District, which includes the former water and wastewater service areas
7 of Citizens Utilities Company of Illinois' operations, already is approved for a separate single-
8 tariff pricing.

9 **Q. In this rate case, is the Company proposing any changes to the design of its standby**
10 **service tariff?**

11 A. No.

12 **Q. Will the Company make its standby service tariff applicable to its Eastern Division?**

13 A. The Eastern Division, which comprises the former service areas of Northern Illinois Water
14 Corporation, has had standby service tariffs since April 23, 1997 for the Sterling District,
15 pursuant to Commission Order in Docket No. 96-0317, and for the Champaign and Pontiac
16 Districts since March 14, 1998, pursuant to Commission Order in Docket No. 97-0254.
17 Pursuant to the then effective tariffs, Northern Illinois Water Corporation entered into standby
18 demand water service agreements with Northwestern Steel and Wire Company dated April 24,
19 1998 (Sterling District) and Caterpillar Tractor, Inc. dated October 16, 1998 (Pontiac
20 Division). The Company believes that no change should be made to the standby service rate
21 design for the Eastern Division at this time, until further experience is obtained.

“B” SCHEDULES

Q. Has the Company submitted the “B” schedules required in Subpart E of the proposed revised Standard Filing Requirements applicable to this case?

A. Yes. These schedules are contained in Exhibit No. 11.0.

Q. Did you prepare, or cause to be prepared under your direction and supervision, these “B” schedules?

A. Yes.

Q. Was the information contained in these schedules obtained or derived from the books and records of the Company?

A. Yes. The source of all the basic accounting information contained in these schedules is the Company’s books and records. The data relating to the year ending December 31, 2000 and 2001 reflects the actual operating results for those periods.

The data provided for the “current” year ending December 31, 2002, and the projected future test year ending December 31, 2003, are estimated in accordance with the methodology explained above.

Q. Generally, what do the “B” schedules show?

A. The “B” schedules show the determination of rate base. Information is provided for the single tariff pricing group (Southern Division/Peoria District/Streator District/Pontiac District), the Champaign District, the Sterling District, the Pekin District, the Lincoln District, the Chicago Metro Water District, and the Chicago Metro Sewer District. Data is also provided for total water and total company.

1 **Q. Please describe Schedule B-1.**

2 A. Schedule B-1, in summary manner, shows the computation of rate base for the Company and
3 for each jurisdictional area referenced above. The rate base for the projected 2003 test year is
4 an average rate base for the year, except where noted below. Rate base is computed at original
5 cost.

6 **Q. Please describe the other B schedules.**

7 A. Schedule B-2 provides a summary of adjustments to rate base. Details of these adjustments are
8 provided, beginning with Schedule B-2.1.

9 Schedule B-3 provides a comparative balance sheet for the prior three years and the test year.

10 Schedule B-4 provides a summary of adjustments to plant in service.

11 Schedule B-5 provides an analysis of gross plant additions, retirements and transfers for the
12 three years prior to the test year.

13 Schedule B-5.1 provides information on gains and losses on sales of property.

14 Schedule B-5.2 provides information on certain property merged or acquired from other utilities
15 since the last rate case.

16 Schedule B-5.3 provides information on certain property leased to the Company.

17 Schedule B-6 provides detail of the depreciation reserve for the test year and prior three years.

18 The Company does not propose any revision to its depreciation rates which were approved by
19 the Commission in Docket No. 00-0340, the depreciation rates previously approved for its

1 Eastern Division (formerly Northern Illinois Water Corporation), or the depreciation rates
2 previously approved for its Chicago Metro Division (formerly Citizens Utilities Company of
3 Illinois).

4 Schedule B-7 provides information on construction work in progress for the test year.

5 Schedule B-7.1 states the percentage complete of construction work in progress for the test
6 year.

7 Schedule B-7.2 provides information on the allowance of funds used during construction, for the
8 test year and prior three years.

9 Schedule B-8 summarizes the calculation of working capital by component for each year. The
10 methodology used to calculate cash working capital is the same as that employed by the
11 Commission in Illinois-American's prior rate order.

12 Schedule B-8.1 shows the calculation of materials and supplies.

13 Schedules B-9 and B-9.1 provide information on accumulated deferred income taxes, as
14 explained in the testimony of Mr. Harris.

15 Schedule B-10 provides information on deferred charge items included in rate base, including
16 those explained in the testimony of Messrs. Ruckman and Harris.

17 Schedules B-11 and B-12 provide information on property held for future use included in rate
18 base.

Schedule B-13 provides information on customer deposits for the test year and the prior three years.

Schedule B-14 provides budget payment balances information.

Schedule B-15 provides information on additions to and transfers from customer advances and contributions in aid of construction.

Q. Generally, how were the projected balances for rate base items developed?

A. The following rate base components are based upon the simple average of the test year beginning and end of year balances: Utility Plant-in-Service, FAS 109 Reg. Asset –Net of Liability, Utility Plant Acquisition Adjustment-DuPage, Reserve for Accumulated Depreciation and Amortization, Deferred Charges, Savings Sharing, Contributions-in-Aid-of-Construction, Accumulated Depreciation on Contributed Property, Bolingbrook Acquisition Rate Base Neutrality, Customer Advances for Construction, and Investment Tax Credit – Pre 1971.

Q. Please discuss the inclusion of the FAS 109 Regulatory Asset Net of Regulatory Liability as shown on Schedule B-1.

A. The Company adopted the Statement of Financial Accounting Standards No. 109 in 1993. In general, SFAS 109 requires utilities to reflect on its balance sheet, regulatory assets for recognition of the future increase in revenue requirements, primarily from the reversal of tax benefits previously flowed through to customers. Also, regulatory liabilities are reflected for recognition of the future reduction in revenue requirements, primarily from deferred income taxes previously provided for at tax rates greater than statutory levels and from the reversal of investment tax credits, through amortization. The Company's treatment of these balances is

1 consistent with the treatment granted in the Company's previous rate cases, Docket Nos. 95-
2 0076, 97-0102 and 00-0340.

3 **Q. Please discuss the inclusion of the Utility Plant Acquisition Adjustment – DuPage.**

4 A. Citizens Utilities Company of Illinois acquired DuPage Utility Company in 1991, and also
5 completed a number of other acquisitions prior to Citizen's last rate case (Docket 94-0481). In
6 Docket 92-0305, and continuing with the rate order issued in Docket 94-0481, the
7 Commission approved DuPage's method of calculating rate base, which included the
8 Acquisition Adjustment. The amounts shown are the unamortized balances.

9 **Q. How were the components of the working capital allowance developed?**

10 A. Working capital allowance includes three components, as further detailed on Schedule B-2.
11 Those components are cash working capital, materials and supplies and deferred charges. To
12 calculate cash working capital, a formula used by Staff in Illinois-American's last rate
13 proceeding was employed based on District or Division specific data. The formula for
14 calculating cash working capital begins with operating expenses before income taxes and
15 deducts amortization of rate case expense, uncollectible expense, and real estate taxes. The
16 result is multiplied by 1/8. The 1/8th factor represents the proportion of annual expenses at any
17 one time which would be paid by the Company but not yet recovered from the ratepayer. For
18 the Champaign and Lincoln Districts, the 1/8th factor is modified slightly to recognize the fact
19 that some billing in that district is performed on a bimonthly basis rather than a monthly basis.

1 **Q. Please describe the other components of working capital.**

2 A. A thirteen month average for materials and supplies was used. Deferred charges include
3 deferred maintenance, deferred Streator R/O costs, and deferred security costs. Deferred
4 Streator R/O costs are discussed in the testimony of Mr. Harris. Deferred security costs are
5 discussed in the testimony of Mr. Ruckman. Deferred maintenance includes primarily steel
6 structure painting and secondarily some pump and well maintenance. The cost of these
7 maintenance programs was deferred at the time of completion. The costs are then amortized
8 over ten years for steel structure painting and seven years for pump and well maintenance.

9 **Q. Please discuss the reduction to rate base entitled Bolingbrook acquisition rate base**
10 **neutrality.**

11 A. On July 25, 2002, the Company completed an asset swap wherein the Company obtained the
12 Village of Bolingbrook's water distribution assets in exchange for the Company's sewage
13 treatment facility. In addition to the exchange of assets, the Company also incurred an
14 installment payment debt obligation to the Village of Bolingbrook for the water assets. This debt
15 obligation is included in the capital structure sponsored by Mr. Ruckman. The water assets
16 obtained and the wastewater assets exchanged, are reflected as additions to or reductions to
17 Chicago Metro's Water and Wastewater rate bases, where appropriate, including adjustments
18 to the accumulated reserve for depreciation, contributions-in-aid-of-construction, and
19 accumulated depreciated on contributed property, consistent with the Commission's approval
20 of journal entries to record this transaction in Docket 01-0001. One provision of the agreement
21 with the Village of Bolingbrook is that the Company will only petition the Commission to add, in
22 rate cases subsequent to the asset exchange, an amount to rate base for the exchanged assets

that is no greater than the average rate base per customer for all Chicago Metro Water District, multiplied by the number of customer residing in the Bolingbrook Service Area. Initially, rate base impact resulting from this asset exchange would exceed this formula, necessitating the adjustment. Over time, as the acquired assets are further depreciated, the rate base deduction will diminish and eventually will be eliminated. This rate base deduction reflects the adjustment necessary to be in compliance with the agreement with the Village.

Q. Please discuss the development of the accumulated reserve for deferred federal and state income taxes.

A. The development of the reserve reflects the adjustment to deferred taxes for difference in book and tax timing differences. The reserve reflects an average calculated in accordance with the proration methodology as established by Internal Revenue Service regulation Reg. §1.167(l)-1(h)(6).

Q. Please discuss the development of the test year balance of pre-1971 federal investment tax credits.

A. The amount of this item, which is deducted from rate base, represents the simple average of the beginning and year-end balances of pre-1971 federal investment tax credits. Those balances reflect the annual amortization of pre-1971 federal investment tax credits referenced later in my testimony.

“C SCHEDULES”

1 **Q. Has the Company submitted the “C” schedules required in Subpart F of the proposed**
2 **revised Standard Filing Requirements applicable to this case?**

3 A. Yes. These schedules are contained in Exhibit No. 12.0.

4 **Q. Did you prepare, or cause to be prepared under your direction and supervision, the**
5 **“C” schedules?**

6 A. Yes.

7 **Q. Was the information contained in these schedules obtained or derived from the books**
8 **and records of the Company?**

9 A. Yes. The source of all the basic accounting information contained in these schedules is the
10 Company’s books and records. The data relating to historic years reflect the actual operating
11 results for the respective periods. The data provided for the “current” year and the projected
12 test year are estimated in accordance with the methodology I have described.

13 **Q. Generally, what do the “C” schedules show?**

14 A. The “C” schedules provide the operating income data for the single tariff pricing group
15 (Southern Division/Peoria District/Streator District/Pontiac District), the Champaign District, the
16 Sterling District, the Pekin District, the Lincoln District, the Chicago Metro Water District, and
17 the Chicago Metro Sewer District. Data is also provided for total water and total company.

18 **Q. Please describe Schedule C-1.**

19 A. Schedule C-1 provides a summary income statement for each jurisdictional area referenced
20 above. It summarizes data contained in subsequent “C” schedules. It provides operating
21 revenue under present and proposed rates, and projected operating expenses and revenue

deductions. Schedule C-1 shows that, in the test year, present rates would yield an earned return of only -0.52% to 6.19%, and the proposed rates would yield a return of 8.02%, which is the Company's estimated cost of capital for the test year.

Q. Please describe Schedule C-2.

A. This schedule provides a summary of the adjustments to operating income.

Q. Please describe Schedules C-2.1 through C-2.4.

A. These schedules provide detail of the adjustments required to reflect ratemaking treatment of certain items or to correct certain original operating projections.

Schedule C-2.1 reflects the cost of preparation and presentation of this rate filing.

Schedule C-2.2 shows an adjustment to steel structure maintenance expense, as discussed in the testimony of Mr. Johnson.

Schedule C-2.3 shows an adjustment adding the amortization of the Streator deferred reverse osmosis charge explained in the testimony of Messrs. Harris and Johnson.

Schedule C-2.4 shows the calculation Citizens acquisition related savings sharing expense, discussed later in my testimony.

Q. Please describe Schedule C-3.

A. This schedule provides sales statistics.

Q. Please describe Schedule C-4.

A. This schedule provides comparative income statements for the prior years and the test year.

1 **Q. Please describe Schedule C-5 and C-5a.**

2 A. These schedules provide the calculation of federal and state income tax at present and proposed
3 rates, respectively.

4 **Q. Please briefly describe the calculation of current federal and state income tax expense.**

5 A. In Schedule C-5 various additions and deductions are made to utility operating income, and the
6 Company's budgeted tax rates are applied to the resulting taxable income. The Company's
7 budgeted federal tax rate is 35% and the Company's budgeted effective state tax rate is 4%.
8 For state income tax, taxable income is multiplied by the tax rate and the result is offset by the
9 current year investment tax credit. Interest cost is deducted since it is deductible for tax
10 purposes but not included in utility operating income. Other adjustments to utility operating
11 income reflect differences between book and taxable income. For example, book depreciation
12 is not used to calculate current income tax. Rather, a separate calculation is made for tax
13 depreciation. An adjustment is then made to utility operating income to add back book
14 depreciation expense and to subtract tax depreciation to arrive at taxable income.

15 **Q. Please explain Schedule C-5.1.**

16 A. This schedule provides information regarding the consolidated federal income tax return.

17 **Q. Please describe Schedules C-5.2 and C-5.3.**

18 A. These schedules include the calculation of deferred income tax expense.

19 **Q. Please describe Schedule C-5.4.**

20 A. This schedule provides calculation of synchronized interest.

- 1 **Q. Please describe Schedule C-5.5.**
- 2 A. This schedule shows investment tax and job development credits.
- 3 **Q. Please describe Schedule C-6.**
- 4 A. This schedule provides information on social and service club dues.
- 5 **Q. Please describe Schedule C-6.1.**
- 6 A. This schedule provides information on industry association dues.
- 7 **Q. Please describe Schedule C-6.2.**
- 8 A. This schedule provides information on expenses incurred for outside services.
- 9 **Q. Please describe Schedule C-7.**
- 10 A. This schedule provides information on charitable contributions.
- 11 **Q. Please describe Schedule C-8.**
- 12 A. This schedule shows selling and advertising expense.
- 13 **Q. Please describe Schedule C-9.**
- 14 A. This schedule shows expenses for civic and political activities.
- 15 **Q. Please describe Schedules C-10 and 10.1.**
- 16 A. These schedules give information on rate case expense.
- 17 **Q. Please describe Schedule C-11.1.**
- 18 A. This schedule provides information on direct payroll expense for various functions.

1 **Q. Please describe Schedule C-11.2.**

2 A. This schedule provides data on the number of employees.

3 **Q. Please describe Schedule C-11.3.**

4 A. This schedule provides information on executive compensation. In its order in Docket No. 02-
5 0285, the Commission permitted exclusion from in Schedule 11.3 of certain confidential
6 information.

7 **Q. Please describe Schedule C-11.4.**

8 A. This schedule provides information on employee benefits.

9 **Q. Please describe Schedule C-11.5.**

10 A. This schedule provides information on incentive compensation, except for certain confidential
11 information excluded from Schedule 11.5 pursuant to the order in Docket No. 02-0285.

12 **Q. Please describe Schedule C-11.6.**

13 A. This schedule provides a reconciliation of overhead and clearing costs.

14 **Q. Please describe Schedule C-12.**

15 A. This schedule provides the calculation of depreciation expense.

16 **Q. Please describe Schedule C-13.**

17 A. This schedule provides a summary of affiliated interest transactions.

18 **Q. Please describe Schedule C-14.**

19 A. This schedule provides information on operating leases.

1 **Q. Please describe Schedule C-15.**

2 A. This schedule provides information on operating expense incurred for major maintenance
3 projects.

4 **Q. Please describe Schedule C-16.**

5 A. This schedule provides information on historical uncollectible expense, as well as pro forma
6 uncollectible expense for the test year at present and proposed rates.

7 **Q. Please describe Schedule C-17.**

8 A. This schedule provides information on insurance expense.

9 **Q. Please describe Schedule C-18.**

10 A. This schedule provides information on taxes other than income taxes.

11 **Q. Please describe Schedule C-19.**

12 A. This schedule gives data on property taxes.

13 **Q. Please describe Schedule C-20.**

14 A. This schedule gives information on local taxes.

15 **Q. Please describe Schedule C-21.**

16 A. This schedule gives data on miscellaneous general expenses.

17 **Q. Please describe Schedule C-22.**

18 A. This schedule gives information on cost savings programs.

1 **Q. Please describe Schedule C-23.**

2 A. This schedule provides information on miscellaneous operating revenues.

3 **Q. Please describe Schedule C-24.**

4 A. This schedule provides information on reserves for legal expense.

5 **Q. Please describe Schedule C-25.**

6 A. This schedule provides information on add-on taxes.

7 **Q. Please describe Schedule C-26.**

8 A. This schedule gives information on the amortization of deferred charges, including the deferred
9 charges described in the testimony of Messrs. Ruckman and Harris.

10 **Q. Please describe Schedule C-32.**

11 A. This schedule gives information on non-utility operations.

12 **CITIZENS ACQUISITION SAVINGS**

13 **Q. Please briefly describe Illinois-American's acquisition of properties of Citizens Utilities**
14 **Company of Illinois ("CUCI").**

15 A. On May 15, 2001, in Docket No. 00-0476, the Commission approved a transaction in which
16 Illinois-American subsequently acquired the water and wastewater systems of CUCI. The
17 acquisition closed on January 15, 2002.

18 In Docket No. 00-0476, the Commission also ordered that, in rate proceedings filed within
19 three years after the order, savings resulting from the acquisition should be shared between
20 Illinois-American's shareholders and customers on a 50-50 basis.

1 On August 14, 2001, in Docket No. 01-0556, Illinois-American filed with the Commission its
2 petition for approval of a methodology for calculating the acquisition savings. An order was
3 issued in Docket No. 01-0556 on July 16, 2002 approving a methodology for calculating the
4 acquisition savings. In that docket, Staff agreed with and the Commission approved Illinois-
5 American's proposed methodology for calculation of the acquisition savings. Staff also agreed
6 and the Commission ordered that, in the next rate case, Illinois-American should quantify the
7 savings consistent with that methodology.

8 **Q. Will savings result from the of the CUCI properties?**

9 A. Yes. The acquisition will produce significant economies and efficiencies which will result in a
10 reduced level of costs as compared to the level which would exist for the separate companies
11 on an aggregate basis ("acquisition savings" or "savings").

12 **Q. What methodology has Illinois-American utilized to quantify the acquisition savings?**

13 A. In accordance with the agreement reached with the Commission Staff and the Order in Docket
14 No. 01-0556, Illinois-American has utilized a two-part methodology: one part covering savings
15 unrelated to the cost of capital; and the other covering cost-of-capital related savings.

16 **Q. Please explain the methodology for quantification of savings not related to the cost of**
17 **capital.**

18 A. To quantify acquisition savings not related to cost of capital, the methodology is as follows: (1)
19 Illinois-American has determined the level of acquisition costs for each savings category for the
20 calendar year immediately preceding announcement of the acquisition, that year being 1998;
21 (2) in the form of workpapers, Illinois-American is providing substantiation that elimination of

1 specific 1998 costs ("base year costs") has resulted from the acquisition; (3) Illinois-American
2 has adjusted the base year costs to the level for the rate case test year using known changes in
3 cost levels for historical periods and forecasted cost data developed for the projected test year
4 rate filing (where assumptions are used to determine savings for a particular savings category,
5 such assumptions have been identified and explained); and (4) fifty percent of the savings so
6 demonstrated has been allocated to Illinois-American's shareholders and fifty percent has been
7 allocated to ratepayers, in accordance with the Commission's Order in Docket No. 00-0476.
8 The shareholders' portion of savings for the test year has been added to the revenue
9 requirement in this rate proceeding. For all savings categories, cost increases have been netted
10 against cost decreases.

11 For the base year costs, CUCI data has been utilized. Illinois-American is making
12 available to Staff and any Intervenors all CUCI data available to Illinois-American including, but
13 not limited to, CUCI general ledgers and/or other documentation and records that are
14 reasonably required to document the base year costs.

15 To adjust the base year costs to the level for the test year in a rate proceeding, Illinois-
16 American has utilized actual CUCI data for years already concluded, or, if CUCI data is
17 unavailable or distorted, normalized Illinois-American data for a comparable cost category/item.
18 If no comparable Illinois-American cost category/item exists for a given year, a 2.5% cost
19 change has been applied to update the savings amount for that year. As with the quantification
20 of base year costs, all available CUCI or Illinois-American data reasonably needed to
21 document the updated savings calculation will be provided. To update the savings calculation
22 for years not yet complete, Illinois-American has utilized projected Illinois-American data for a

comparable savings category/item that is developed as a part of the forecast submitted in this proceeding.

As indicated above, Illinois-American has not utilized distorted CUCI or Illinois-American data for years which have already occurred, during the adjustment process. In determining whether data is distorted, Illinois-American has considered operating information relating to the expense and compared the expense levels for the year to prior year(s). Any unusual trends or unusual operating conditions have been analyzed and documented for review.

For each savings category, Illinois-American has explained the causal connection between the acquisition and the resulting savings.

Q. Please discuss the second part of the methodology, related to cost-of-capital savings.

A. The cost of capital methodology itself has two approaches: one for the area presently served by CUCI, and the other for Illinois-American's other service areas. Each approach will be discussed below.

CUCI Service Territory:

In connection with the acquisition, Illinois-American assumed approximately \$23,325,000 of debt currently on the books of CUCI's parent, Citizens Communications Company ("assumed debt"). Illinois-American expects that the acquisition will result in certain cost of capital-related savings equal to the difference between the assumed debt interest rate when Citizens Communications Company ("CCC") was responsible for the assumed debt and the assumed debt interest rate when Illinois-American or its affiliates became responsible for the assumed debt ("cost of debt savings"). The assumed debt interest rate is linked to the Bond Market

Association Municipal Swap Index (“Benchmark”) so that the Commission can estimate what the assumed debt interest rate would have been absent the acquisition. The procedure for calculating the savings on the assumed debt is as follows:

$$ADS_t = \text{Spread} + \text{Bench}_t - \text{ADI}_{\text{IAWC},t}$$

$$\text{Spread} = \text{ADI}_{\text{CCC},0} - \text{Bench}_0$$

| | | | |
|-------|------------------------------|---|---|
| Where | ADS_t | = | Savings on the assumed debt at time t ; |
| | Spread | = | Difference between interest rate on Benchmark and assumed debt for the twelve months immediately preceding the acquisition; |
| | Bench_t | = | Interest rate on the benchmark at time t ; |
| | Bench_0 | = | Average interest rate on the benchmark for the twelve months immediately preceding the acquisition; |
| | $\text{ADI}_{\text{IAWC},t}$ | = | Interest rate on assumed debt to Illinois-American at time t ; and |
| | $\text{ADI}_{\text{CCC},0}$ | = | Average interest rate on to CCC for the twelve months immediately preceding the acquisition. |

Under the approved methodology, to calculate the total cost of debt savings in dollars, cost of debt savings will be applied to the portion of assumed debt reflected in the capital structure allowed for each Illinois-American rate case through May, 2004. Fifty percent (50%) of the total cost of debt savings in dollars will be included in the revenue requirement for only the service territory acquired in Docket No. 00-0476 (“CUCI service territory”). However, if the assumed debt interest rate increases following the acquisition, vis-à-vis the assumed debt interest rate absent the acquisition (as estimated by the sum of the benchmark and spread), then the increase in the assumed debt interest rate will be absorbed by Illinois-American.

Non-CUCI Service Territory:

Under the approved methodology, the assumed debt will be included in the Illinois-American capital structure allowed for each rate case through maturity. Thus, the same capital structure will be used for both CUCI and Non-CUCI service territories.

To measure acquisition-related cost of capital savings for non-CUCI service territories, the embedded cost of debt excluding the assumed debt (“cost of debt excluding assumed debt”) will be compared with the embedded cost of debt including the assumed debt (“cost of debt including assumed debt”). The additional debt issued as part of the acquisition financing will be included in both embedded cost of debt calculations.

To calculate the non-CUCI service territory acquisition-related cost of capital savings in dollars, the savings resulting from the difference between the cost of debt including assumed debt and the cost of debt excluding assumed debt will be applied to the long-term debt ratio in each Illinois-American rate case through May, 2004. Fifty percent (50%) of the non-CUCI service territory acquisition-related cost of capital savings in dollars will be included in the revenue requirement for the non-CUCI service territory. However, if the cost of debt including assumed debt exceeds the cost of debt excluding assumed debt, then the increase in the embedded cost of debt will be absorbed by Illinois-American.

Q. Does this conclude your testimony?

A. Yes, it does.

Illinois - American Water Company

(a wholly-owned subsidiary of American Water
Works Company, Inc.)

**Projected Financial Information
December 31, 2003 and 2002**



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Report of Independent Accountants

To the Board of Directors of
Illinois - American Water Company

We have examined the accompanying projected statement of utility operating income for the year ending December 31, 2003 and the projected statements of rate base and capital structure at December 31, 2003 and 2002 (projected financial information) of Illinois - American Water Company (the Company), a wholly-owned subsidiary of American Water Works Company, Inc. Our examination was made in accordance with standards established by the American Institute of Certified Public Accountants and, accordingly, included such procedures as we considered necessary to evaluate both the assumptions used by management and the preparation and presentation of the projected financial information.

The accompanying projected financial information has been prepared by management based on its operating projections for the years ending December 31, 2003 and 2002. The projected financial information and this report were prepared in connection with an application to the Illinois Commerce Commission by the Company for an increase in water rates and should not be used for any other purpose.

In our opinion, the projected financial information referred to in the first paragraph is presented in conformity with the guidelines for presentation of projected information established by the American Institute of Certified Public Accountants, as set forth in its Guide for Prospective Financial Information, and the underlying assumptions provide a reasonable basis for management's projections, given the hypothetical assumptions that water rates in effect during 2001 will not change prior to December 31, 2003 and that the costs of the Company's proposed steel structure maintenance program and the amortization of the deferred security costs will be recoverable in future rates. However, even if water rates in effect during 2001 do not change prior to December 31, 2003 and the costs for steel structure maintenance and amortization of deferred security costs are not allowed to be recovered in rates, there will usually be differences between projected and actual results because events and circumstances frequently do not occur as expected, and those differences may be material. We have no responsibility to update this report for events and circumstances occurring after the date of this report.

PricewaterhouseCoopers LLP

September 13, 2002

Projected Statement of Utility Operating Income
For the Year Ending December 31, 2003
(Dollars in thousands)

| | |
|-------------------------------|-------------------|
| Operating revenues | <u>\$ 145,282</u> |
| Operating expenses: | |
| Operation and maintenance | 94,249 |
| Depreciation and amortization | 28,776 |
| Taxes on operating income: | |
| General | 9,254 |
| Income tax benefit | <u>(423)</u> |
| | <u>131,856</u> |
| Utility operating income | <u>\$ 13,426</u> |

The accompanying Summary of Significant Projection Assumptions and Accounting Policies
are an integral part of this Projected Financial Information

Projected Statement of Rate Base
December 31, 2003 and 2002
(Dollars in thousands)

| | December 31, | |
|---|---------------------|-------------------|
| | 2003 | 2002 |
| Gross utility plant in service at original cost | \$ 805,652 | \$ 773,149 |
| FAS 109 regulatory asset, net of related liability | 1,545 | 1,644 |
| Utility plant acquisition adjustment - Dupage | 242 | 256 |
| Less: Reserve for accumulated depreciation and amortization | 229,037 | 204,529 |
| Net utility plant in service | 578,402 | 570,520 |
| Plus: Cash working capital | 12,393 | 10,149 |
| Materials and supplies | 2,243 | 2,189 |
| Deferred charges | 14,584 | 11,668 |
| Acquisition savings sharing | 281 | 270 |
| Accumulated depreciation contributed property | 32,809 | 29,361 |
| Less: Customer advances for construction | 32,399 | 29,369 |
| Contributions in aid of construction | 122,934 | 120,390 |
| Bolingbrook rate base adjustment | 5,084 | 6,327 |
| Deferred federal income tax | 22,411 | 20,770 |
| Deferred state income tax | 5,393 | 5,034 |
| Investment tax credit - pre 1971 | 67 | 87 |
| Jurisdictional rate base at original cost | <u>\$ 452,424</u> | <u>\$ 442,180</u> |

The accompanying Summary of Significant Projection Assumptions and Accounting Policies are an integral part of this Projected Financial Information

Projected Statement of Capital Structure
December 31, 2003 and 2002
(Dollars in thousands)

| | December 31, | |
|----------------|---------------------|-------------------|
| | 2003 | 2002 |
| Long-term debt | \$ 296,040 | \$ 277,986 |
| Common Equity | <u>241,738</u> | <u>243,755</u> |
| Total | <u>\$ 537,778</u> | <u>\$ 521,741</u> |

The accompanying Summary of Significant Projection Assumptions and Accounting Policies
are an integral part of this Projected Financial Information

Summary of Significant Projection Assumptions and Accounting Policies

1. Introduction

The projected statement of utility operating income for the year ending December 31, 2003 and the projected statements of rate base and capital structure at December 31, 2003 and 2002 (Projected Financial Information), except as discussed below, to the best of management's knowledge and belief, reflect the projected rate base and projected capital structure at December 31, 2003 and 2002 and the projected utility operating income of Illinois-American Water Company (the Company), a wholly-owned subsidiary of American Water Works Company, Inc. (American), assuming no change prior to December 31, 2003 in water rates from those rates in effect at December 31, 2001. The Projected Financial Information reflects management's judgment as of September 13, 2002, the date of the Projected Financial Information. The Projected Financial Information reflects the Company's acquisition of Citizens Communications Company (Citizens) water and wastewater assets, which was completed on January 15, 2002 and approved by the Illinois Commerce Commission (the commission) on May 15, 2001 (see Note 2). The Projected Financial Information reflects management's belief of the expected conditions and the Company's expected course of action assuming no change in water rates prior to December 31, 2003.

The Projected Financial Information was prepared in connection with an application to the Commission by the Company for an increase in water rates and should not be used for any other purpose. The assumptions disclosed herein are those that management believes are significant to the Projected Financial Information. However, even if water rates in effect during 2001 do not change prior to December 31, 2003 and the costs for steel structure maintenance and amortization of deferred security costs are not allowed to be recovered in rates, there will usually be differences between projected and actual results because events and circumstances frequently do not occur as expected, and those differences may be material.

2. Acquisition

On January 15, 2002 the Company completed its purchase of the water and wastewater assets of Citizens in Illinois for approximately \$231 million in cash, debt and common stock in a transaction accounted for under the purchase method of accounting in accordance with Statement of Financial Accounting Standards No. 141, "Business Combinations." The operations that were acquired provide service to approximately 48,000 water customers and 36,000 wastewater customers in portions of 32 communities located in 7 counties near Chicago. For the purpose of the Projected Financial Information, the Company assumes a cost savings adjustment of 50% calculated in accordance with the Commission's order dated May 15, 2001.

3. Significant Accounting Policies

The Company's accounting policies used in the preparation of this Projected Financial Information are in conformity with accounting principles generally accepted in the United States of America for regulated public utilities and accounting procedures prescribed by the Commission for ratemaking purposes. The Company follows the provisions of Statement of Financial Accounting Standards No. 71, "Accounting for the Effects of Certain Types of Regulation" (SFAS No. 71), which provides guidance for the preparation of financial statements of companies in regulated industries.

Summary of Significant Projection Assumptions and Accounting Policies

Utility Plant and Equipment

Additions to utility plant and replacements of retired units of property are capitalized. Costs include material, direct labor, and such indirect items as engineering and supervision, payroll taxes and benefits, transportation, and an allowance for funds used during construction (AFUDC). Repairs, maintenance and minor replacements of property are charged to current operations. The costs incurred to acquire and internally develop computer software for internal use are capitalized as a unit of property. The cost of property units retired in the ordinary course of business plus removal cost (net of salvage) is charged to accumulated depreciation.

Utility plant acquisition adjustments include the difference between the purchase price of utility plant and its original cost (less accumulated amortization) when first devoted to public service and are being amortized to income over periods ranging from five to forty-years.

Depreciation is computed on the straight-line method over the estimated service lives of assets as approved by the Commission.

In accordance with the Commission's regulations, depreciation on contributed facilities is charged to contributions in aid of construction.

Regulatory and Long-Term Assets

The Company has recorded a regulatory asset for the additional revenues expected to be realized as the tax effects of temporary differences previously flowed through to customers reverse. These temporary differences are primarily related to the difference between book and tax depreciation on property placed in service before the adoption by the Commission of full normalization for rate making purposes.

The regulatory asset for income taxes recoverable through rates is net of the reduction expected in future revenues as deferred taxes previously provided, attributable to the difference between the state and federal income tax rates under prior law and the current statutory rates, reverse over the average remaining service lives of the related assets.

Debt expense is amortized over the lives of respective issues. Call premiums on the redemption of long-term debt, as well as associated unamortized debt expense, are deferred and amortized to the extent they will be recovered through future service rates. Expenses of preferred stock issues without sinking fund provisions are amortized to current operations over thirty years from date of issue; expenses of issues with sinking fund provisions are charged to operations as shares are retired.

Deferred business services project expenses consist of reengineering and start-up activities for consolidated customer and shared administrative service centers that have been established by American. These costs will be amortized over a 20-year period beginning in fiscal 2002.

Programmed maintenance costs are deferred and amortized to current operations on a straight-line basis over periods ranging from five to ten years, as authorized by the Commission in their determination of rates charged for service.

Summary of Significant Projection Assumptions and Accounting Policies

Customer Advances and Contributions in Aid of Construction

The Company may receive advances and contributions to fund construction necessary to extend service to new areas. As determined by the Commission, advances for construction are refundable for limited periods of time as new customers begin to receive service. Amounts which are no longer refundable are reclassified to contributions in aid of construction.

Recognition of Revenues

Water service and wastewater revenues include amounts billed to customers on a cycle basis and unbilled amounts determined using estimated usage from the date of the latest meter reading to the end of the accounting period.

Employees' Stock Ownership Plan

The Company participates in an Employees' Stock Ownership Plan (ESOP) sponsored by American which provides for beneficial ownership of American common stock by all associates who are not included in a bargaining unit. Each participating associate can elect to contribute an amount that does not exceed 2% of their wages. In addition to the associate's participation, the Company makes a contribution equivalent to ½% of each participant's qualified compensation, and matches 100% of the contribution by each participant. The Company expenses its matching contributions to the ESOP.

Savings Plan for Employees

The Company participates in a 401(k) Savings Plan for Employees sponsored by American. All associates can make contributions that are invested at their direction in one or more funds including a fund consisting entirely of American common stock. The Company currently matches 50% of the first 5% of each employee's wages contributed to the plan. All of the Company's matching contributions are invested in the fund of American common stock. The trustee of the plan may purchase shares of American common stock at the prevailing market price in the open market or private transactions. The Company expenses its contributions to the plan.

Pension Benefits

The Company participates in a noncontributory defined benefit pension plan sponsored by American covering substantially all associates. Benefits under the plan are based on the associate's years of service and average annual compensation for those 60 consecutive months of employment which yield the highest average. Pension cost of the Company is based on an allocation from American of the total cost related to the plan.

The Company also sponsors a noncontributory defined benefit pension plan covering substantially all former Northern Illinois Water Corporation (Northern) associates. Benefits under this plan are based on the associate's years of service and average annual compensation for those 60 consecutive months of employment, which yield the highest average. During 2001, all non-union employees were consolidated into the American noncontributory defined benefit pension plan described above. The assets of the plan for former Northern non-union employees have not yet been consolidated into the American plan.

The Company's funding policy for both plans is to contribute at least the minimum amount required under the Employee Retirement Income Security Act of 1974.

Summary of Significant Projection Assumptions and Accounting Policies

Postretirement Benefits Other Than Pensions

The Company participates in an American plan that provides certain life insurance benefits for retired associates and certain health care benefits for retired associates and their dependents. Substantially all associates may become eligible for these benefits if they reach retirement age while still working for the Company. Retirees and their dependents under age 65 can elect either a point-of-service managed care plan or a health maintenance organization (HMO). Associates who elect to retire prior to attaining age 65 are generally required to make contributions towards their medical coverage until attaining age 65. Retirees and their dependents age 65 and over are covered by a Medicare supplement plan. Costs of the Company are based on an allocation from American of the total cost related to the plan.

The Company sponsors a plan that provides certain life insurance benefits and certain health care benefits for associates and their dependents that have retired from Northern. Substantially all former Northern associates may become eligible for these benefits if they reach retirement age while still working for the Company.

The Company's policy is to fund postretirement costs as benefits are paid.

4. Hypothetical Assumptions

The purpose of the Projected Financial Information is to reflect water rates in effect pursuant to the Company's and Citizens' most recent rate orders and the Company's projected cost of service for the year ending December 31, 2003 including costs associated with Citizens' operations. Such information will then be included in the Company's application for an increase in water rates.

Water Rates

The preparation of the Projected Financial Information is based on the assumption that the water rates in effect at December 31, 2001 will not change prior to December 31, 2003.

Steel Structure Maintenance

The preparation of the Projected Financial Information is based on the assumption that the Company will be allowed to recover in rates a proposed amount of \$2.1 million per year for its steel structure maintenance program.

Deferred Security Costs

The Projected Financial Information is based on the assumption that the Company will be able to recover in rates the amortization of the deferred costs associated with the Company's increased security measures, as well as the on-going costs of those security measures. The Company has deferred costs related to increased security measures that were implemented to secure facilities after the terrorist attacks on September 11, 2001. The deferral of these costs has been continued through August 31, 2003 for purposes of the Projected Financial Information. The total projected deferred security costs of \$12.5 million are to be amortized over a 5-year period beginning in September 2003. Additionally, the Company has projected on-going security costs to be approximately \$6.7 million annually. In accordance with regulatory filing guidelines to ensure proper consideration of these costs, the Company has included both the projected annual

Summary of Significant Projection Assumptions and Accounting Policies

amortization expense of \$2.5 million and the projected on-going annual security cost expense of \$6.7 million in the Projected Financial Information for the year ended December 31, 2003.

5. Operating Revenues

Projected operating revenues were derived by applying the water rates and tariffs in effect at December 31, 2001 to current and historical water consumption trends adjusted for expected changes in the number and mix of customers during 2003. For residential water customers, usage was averaged for the latest five years, and a reduction factor based on 2001 base usage and the 11-year average of weather-related usage was applied to all but two districts to recognize the downward trend in residential water usage. For all other classifications, data for the most recent 12- to 24-month period was used. Projected rates and water consumption for major customers was specifically analyzed.

6. Operating and Maintenance Expenses

As discussed in the following assumptions, operating and maintenance expense items have been projected based on a number of factors. For those areas where firm bids have not been received or other pertinent information is not available, management expects the cost escalator rate to be 2.5% which is equivalent to, the Company's projection of the Water and Sewerage Maintenance Index, a component of the Consumer Price Index, for the years ending December 31, 2003 and 2002. Where appropriate, this cost escalator rate was used in the development of operating and maintenance expense amounts.

Operating and maintenance expenses include the following:

Operating Labor and Salaries

Operating labor and salaries expense assumes wage increases for 2003 and 2002 based on union contracts currently in effect, for contracts expiring prior to December 31, 2003, and expected annualized wage increases of 3% for each year were projected from the expiration date of the contract through 2003. Wage levels for non-union associates were projected to increase annually by 4.5% for 2002 and 4% for 2003. Operating labor and salaries expense also assumes that the Company will be responsible for approximately 74% of the costs of American associates who perform regional functions in the Company's Corporate office. These costs were projected in total in the same manner as previously described. Expense for the 2003 Annual Incentive Plan is based on a range of 5.0% to 22.5% of each associate's annual salary midpoint, based on their salary band, for 2002 (increased by the 2.5% inflationary factor for 2003), and applied at a target rate of 85%.

Summary of Significant Projection Assumptions and Accounting Policies

Purchased Water

The Company purchases water for its Chicago Metro Division from fourteen suppliers, who in turn purchase water from the City of Chicago. Projected purchased water expense is based on recent historical results, adjusted to reflect a 4% annual increase through 2003 due to a published planned rate increase from the City of Chicago.

Maintenance

The 2003 projected maintenance expense reflects management's estimate of programmed maintenance activities based on needed maintenance projects and an amount projected for nonprogrammed maintenance activities based upon historical activity levels. A projected annual increase factor of 2.5% for 2003 and 2002 was applied where appropriate.

Fuel and Power

Projected fuel and power usage is based on projected system delivery for the year ending December 31, 2003. Projected fuel and power rates are based on estimates provided by the Company's fuel and power suppliers. None of the five suppliers who serve the Company's various service areas expect annual increases in fuel and power rates for 2002. For 2003, a projected annual increase factor of 2.5% was applied to projected fuel and power rates.

Chemical Expense

Projected chemical expense is based on individual chemical costs established through competitive bidding on a two-year basis (2001 and 2002) for most chemicals. Projected chemical expense for 2003, with the exception of dechlorination and carbon lease costs discussed below, were adjusted to reflect a 2.7% anticipated reduction in system demand, and then a 2.5% increase in chemical costs. Dechlorination costs were projected based on an annual increase factor of 2.5%. All monthly leased granular activated carbon (GAC) costs were then added to the projected individual monthly chemical costs. Leased GAC costs were projected at contract prices established or projected based on data obtained from manufacturers/suppliers. Expected chemical usage for the year ending December 31, 2003 assumes a normal weather pattern, normal source water quality, current Safe Drinking Water Act requirements and a reduction in the level of unaccounted for water loss.

Management Fees

Budgets for the national Customer Call Center (customer service), the national Shared Services Center (financial services), regional data processing centers and corporate offices of American Water Works Service Company, Inc. (Service Company) are prepared annually in accordance with budget procedures established by American. From these budgets and actuarial estimates of related pension costs, projections were made of expenses to be charged as management fees during 2003.

Customer Accounting

Customer accounting expense includes the cost for personnel to prepare and mail bills, process accounts receivable transactions, read customers' meters and collect payments on bills. This expense also includes the provision for losses on uncollectible accounts receivable which was projected based on historical charge-off experience applied to projected revenues. Other customer accounting expenses are based on recent historical data adjusted by a projected 2.5% annual increase factor where appropriate.

Summary of Significant Projection Assumptions and Accounting Policies

Waste Disposal

Utilizing information based on historical data, a schedule was established for planned cleaning of lagoons. Cost information regarding the cleaning and disposal projects was obtained from the last successful contractor, and that cost, adjusted for an annual inflationary increase of 2.5% for 2003, was used. Contract waste disposal expense for wastewater was based on recent historical data.

Insurance Expense

The Company provides group life and medical insurance for its employees. Utilizing the projected employee workforce level for active associates, each associate was analyzed for projected wage levels, life insurance, optional life insurance, personal dependent coverage and medical plan. Other postretirement benefits, costs incurred related to Statement of Financial Accounting Standards No. 106, "Employers' Accounting for Postretirement Benefits Other than Pensions" (SFAS 106), were projected based on actuarial evaluations. Projected group insurance expense was analyzed to determine reductions in operating costs resulting from calculating capital labor credits. Current and retired associates, along with dependents of deceased employees, were individually analyzed to determine the expenses to be reimbursed to the Company for said coverage. Individual premium rates were analyzed, and the cost of each individual type of insurance coverage was projected on the basis of an analysis of existing insurance contracts and anticipated changes. The Company expects individual premium rates to increase approximately 13.5% in 2003 and 10% in 2002.

Individual insurance premium and SFAS 106 costs for American associates, who perform regional functions in the Corporate Office, were projected in the same manner as described above, with approximately 74% allocated to the Company.

Projections were made of premium costs for the various insurance policies protecting the Company and its assets. These projections were based on information provided by the Service Company Director of Risk Management who is responsible for working with insurance brokers in obtaining competitive bids for the Company's insurance needs. 2003 premium costs for general liability, excess liability, workmen's compensation and property insurance were based on information provided by the Service Company Director of Risk Management starting with current expense, including Chicago, for the policy period beginning October 2001, a projected 9.7% increase in 2002 and a 4.5% increase in 2003 on October anniversary dates. Other premium costs were based on the current expense as of July 2002, and a 9% increase on the premium anniversary dates for each type of coverage in 2003. Projected insurance other than group expense was analyzed to determine reductions in operating costs resulting from calculating capital labor credits.

Workmen's compensation premium expense for American associates, who perform regional functions in the corporate office, were projected in the same manner as described above, with approximately 74% allocated to the Company.

Summary of Significant Projection Assumptions and Accounting Policies

In addition to annual premium expense, high losses since 1996 throughout the American System have resulted in increased expense beginning in 2002 for retrospective adjustments to cover prepaid insurance premium deficits. Personnel in the Service Company also provided the additional retrospective premium expense information.

Pension Expense

Pension benefit expenses were projected based on actuarial evaluations calculated in accordance with the requirements contained in Statement of Financial Accounting Standards No. 87 "Employers' Accounting for Pensions" (SFAS 87). Projected SFAS 87 expense includes a 9.55% increase over the most recent 2002 estimate. Similarly, the Company is funding its current annual level of pension costs based on actuarial evaluations. Projected pension expense was further analyzed to determine reductions in operating costs resulting from calculating capital labor costs.

General Office Expense

A review was made of recent historical costs associated with operating the general office of the Company. Based on that review, an itemized projection by month was made for such expenditures as stationery, office cleaning services, bank service charges, other utility bills and employee-related expenses for 2002. A projected annual increase factor of 2.5% for 2003 was applied where appropriate.

Rent Expense

Rent expense represents the costs related to rental and lease agreements, which were reviewed to ascertain monthly and yearly costs. All agreements for equipment and property subject to increase were reviewed with the property owners to determine possible increases. An annual increase of 2.5% for 2003 was projected for those items for which projected costs could not be determined on the basis of such reviews.

Regulatory Expense

Projected regulatory expense includes amortized regulatory expense for the three-year period March 2001 through March 2004 and amortized depreciation study expense for the five-year period March 2001 through March 2006.

Miscellaneous Expense

A review was made of recent historical costs associated with materials used and expenses incurred in the operation of source of supply plant, pumping plant, production plant, water treatment plant, distribution system plant and customer service. This review was exclusive of related labor expenses. A review was made of other historical expenses associated with outside services utilized, injury and damages expenses, employee educational expenses, legal expenses, transportation expenses and other general expenses. The Company's overall goals and programs that might affect these items were also reviewed. Projected transportation, ESOP and savings plan expenses were analyzed to determine reductions in operating costs resulting from calculating capital labor credits. Based on these reviews, an itemized projection was made for expenses to be incurred in 2003 and 2002. A budget for the Belleville Laboratory, which performs testing and analysis for the American Water System, is prepared annually in accordance with established water quality procedures. Annual projected expenses were then developed and provided by American for each utility subsidiary.

Summary of Significant Projection Assumptions and Accounting Policies

Savings Plan and ESOP expenses for Service Company associates who perform regional functions in the corporate office are projected, with approximately 74% allocated to the Company. A projected annual increase factor of 2.5% for 2003 was applied for other costs where appropriate.

Depreciation Expense

Projected depreciation expense was calculated using depreciation rates previously established for each account. Additions and retirements for utility plant accounts and contributions in aid of construction included for purposes of calculating the projected depreciation expense for 2003 are based on the Company's capital investment projections.

Amortization Expense

The Company performed a review of all projected construction improvements to determine if any work was to be performed on leased property or if any utility plant acquisition adjustments were projected. A review was then made of all current amortized costs, which included regulatory asset AFUDC and utility plant acquisitions. Based on this review, no significant cost increases for individual items were projected, except for the amortization of deferred security costs incurred during 2001 and projected through 2003. No new capital leases were projected for 2003.

7. Taxes on Operating Income

General Taxes

General taxes consist of the following:

- Property
- Payroll
- Invested capital tax
- Other general

The projected general taxes expense includes the additional property tax base resulting from projected utility plant additions, increases in invested capital and projected increased labor costs. Real estate property tax projections are based on reassessments and changes in property tax rates. All other projected tax rates are assumed to remain the same as the rates in effect during the year ended December 31, 2001.

Federal and State Income Taxes

Projected federal and state income tax expense is based on the application of existing federal and state income tax laws and regulations.

Income Taxes

The Company, its parent and affiliates participate in a consolidated federal income tax return. Federal income tax expense for financial reporting purposes is provided on a separate return basis, except that the federal income tax rate applicable to the consolidated group is applied to separate company taxable income and the benefit of net operating losses, if any, is recognized currently.

Summary of Significant Projection Assumptions and Accounting Policies

Certain income and expense items are accounted for in different time periods for financial reporting than for income tax reporting purposes. Deferred income taxes have been provided on the difference between the tax bases of assets and liabilities and the amounts at which they are carried in the financial statements. These deferred income taxes are based on the enacted tax rates anticipated to be in effect when such temporary differences are expected to reverse. Regulatory assets and liabilities are recognized for the effect on revenues expected to be realized as the tax effects of temporary differences previously flowed through to customers reverse.

Investment tax credits have been deferred and are being amortized to income over the average estimated service lives of the related assets.

Effective December 1, 1990, the Company was directed to prospectively defer state investment tax credits and amortize the tax credit over the average life of the related property. State investment tax credits generated prior to that date were recorded as a reduction to the state tax liability on a flow-through basis.

The difference between the expected federal income tax expense at the statutory rate of 35% and the projected federal income tax expense included in the projected statement of utility operating income results principally from the scheduled amortization of deferred investment tax credits for 2003.

For the purposes of determining taxable operating income, the Company is allowed to deduct interest expense, which is not included in the Projected Statement of Utility Operating Income. Projected interest expense for fiscal 2003 is approximately \$16.2 million.

The state income tax provision is determined by use of the unitary tax method as required by the State of Illinois. This method determines the percentage of U.S. taxable income for American and all of its subsidiaries that are applicable to the Company by calculating a percentage determined by taking the relative proportion of the Company revenues, payroll and assets and dividing it by the consolidated American revenue, payroll and assets. The state income tax rate is expected to approximate 4%.

8. Customer Advances for Construction and Contributions in Aid of Construction

Projected contributions in aid of construction assumes projects financed by customer advances and contributions are completed in the year the funds are received and that advances and contributions will approximate the projected construction costs required to complete the project. For 2003 and 2002, the Company has projected that substantially all funds received will be subject to refund; therefore, all such funds have been reflected as customer advances. Projected customer advances are partially or wholly refunded to the customers over a 10 year period. Any advance amounts remaining are credited to contributions in aid of construction and the related depreciation on the contributed property is charged to contributions in aid of construction.

Summary of Significant Projection Assumptions and Accounting Policies

9. Rate Base

Capital Investment Projections

Projected additions to utility plant (net of retirements) are \$32.5 million and \$52.2 million for 2003 and 2002, respectively.

Working Capital Allowance

The working capital allowance consists primarily of cash working capital. To calculate the cash working capital, the Company used a formula approach whereby 45 days (i.e., one-eighth of a year) of operating expenses before taxes less rate case expense amortization, depreciation and amortization, uncollectible expense and real estate taxes was considered an estimate of cash working capital requirements.

10. Capital Structure Assumptions

Major capital structure change assumptions, excluding retained earnings and dividends, are as follows:

| | (Dollars in thousands) | |
|--|------------------------|----------------------|
| | December 31, 2003 | December 31, 2002 |
| 6.0% Series, General Mortgage Bonds | \$ 20,000 | \$ - |
| 5.65% Series, General Mortgage Bonds | | 30,000 |
| 4.92% Series, General Mortgage Bonds | - | 103,758 |
| Variable Rate, Tax Exempt Bonds | - | 23,325 |
| 7.19% Series, General Mortgage Bonds | - | (21,000) |
| 9.87 Fixed and variable payment debt | (1,457) | 6,828 |
| 9.22% Series, General Mortgage Bonds | (600) | (600) |
| 6.50% Shiloh note | (135) | (126) |
| Unamortized debt issuance costs | 246 | (790) |
| Preferred Stock Redemptions and Sinking Fund Deposits | - | (610) |
| | <u>\$ 18,054</u> | <u>\$ 140,785</u> |

Summary of Significant Projection Assumptions and Accounting Policies

11. Dividends

The Company has projected dividend payments of \$9,860,531 and \$1,747,136 to its common stockholders and \$33,958 and \$-0- to its preferred stockholders in 2002 and 2003, respectively. Projected common stock dividends are based on 75% of projected net income.

ILLINOIS-AMERICAN WATER COMPANYSUMMARY OF OPERATING REVENUE PROJECTION
2003 OPERATING PROJECTIONProcedure and Assumptions

Utilizing current and historical information, monthly analyses of customer growth and loss trends were projected for each customer classification. The schedule reflected the Company's projections of customer gains and losses.

Where available, ten years or more of bill analyses and historical sales information by month were compiled to reflect per day volumetric usage for all classifications. Within classifications, a further review by type of billing was performed to assure that distortions were not reflected. For residential customers, the most recent 12-to 60-month period was averaged, thus establishing a monthly historical gallons per day factor. For all except two districts, this average historical gallons per day factor was adjusted to reflect a continuing decline in indoor usage per customer. For all other classifications, data for the most recent 12- to 24-month period was reviewed to calculate a per day volumetric usage. A further review was performed and any account determined to be significant enough to affect an average was individually projected. For these accounts, individual water sales were reflected. Further reviews of the larger customers were accomplished by direct contact. Where appropriate, adjustments were made on the basis of the further reviews. Any significant deviations from the average calculation were footnoted on the individual water sales backup.

Based upon an analysis by management, private fire service customers were projected on the basis of current trends. The projection of hydrant installations was based on discussions with municipal customers. Utilizing the monthly bill analysis as a basis, the number of meters, by size and by classification, were projected from the forecasted billing schedule to calculate the public fire protection charge billed to each customer. After establishing the projected volumetric sales by classification, the number of private fire services by size and the proposed number of hydrant installations, the current tariffs were applied to develop revenues.

Based upon historical bulk sales and the review of possible future sales, a determination was made as to the volumetric total. Since these sales are made through a water dispensing machine or fire hydrant, an average cost per thousand gallons was developed from the most recent historical 12-month period and applied to the projected sales.

Summary of Operating Revenue Projection
2003 Operating Projection

Unbilled revenues were projected based upon historical average reading or billing schedules.

To project Other Operating Revenues, a review was made of historical collections within that category of revenues, including non-payment reconnection fees, after hours reconnection fees, insufficient check fees, home inspection fees, sewer billing revenue (consistent with the methodology approved in Docket No. 95-0076), late payment fees, rents from water property, laboratory services and municipal tax revenues. A review was also made to determine whether future plans would significantly affect these items. Except where annual rents from water property remain unchanged, 2003 projections reflect an increase of 2.5% over 2002 plan costs.

Summary of Projections

Based upon the analysis described above, Residential Water Revenues are projected to be \$83,511,598; Commercial Water Revenues are projected to be \$20,453,475; Industrial Water Revenues are projected to be \$8,489,683; Fire Service Water Revenues are projected to be \$8,523,150; Public Authority Water Revenues are projected to be \$5,645,706; Resale Water Revenues are projected to be \$8,027,492; Other Water Revenues for bulk sales are projected to be \$70,702; Net Unbilled Water Revenues are projected to be (\$51,397). Residential Wastewater Revenues are projected to be \$8,252,280. Commercial Wastewater Revenues are projected to be \$1,187,220. Total Water Revenues are projected to be \$134,670,409, and total Sewer Revenues are projected to be \$9,439,500. Other Operating Revenues are projected to be \$1,172,588.

Description of Workpapers

Form 168A - Line Number 2 reflects projections of Water Revenues by months. Line Number 3 reflects projections of Sewer Revenues by months. Line Number 4 reflects projections of Other Operating Revenues by months. Line Number 6 reflects projections of total operating revenues for each month.

ILLINOIS-AMERICAN WATER COMPANYSUMMARY OF LABOR EXPENSE PROJECTION
2003 OPERATING PROJECTIONProcedure and Assumptions

Utilizing the authorized associate count form, a detailed analysis was completed that established the necessary associate levels required to safely operate, provide necessary services and complete planned programs for the Company throughout the year. Historical data adjusted for implementation of cost containment programs and other efficiencies were utilized to calculate the number of regular and overtime hours required to perform the various necessary programs and associate functions. The number of hours was projected by function, which were then distributed to the operations/maintenance and capital lines. Individual projected hourly rates, by month for 2003, were applied to the projected hours to calculate the total monthly operations/maintenance and capital labor expense. Based on the 15 union contracts in effect, known wage rates for 2003 were used. If the actual rates were not established, 3.0% annual increases were projected from the expiration date of the contract through 2003. Wage levels for non-union associates were projected to increase 4% annually over actual 2002 levels.

Expenses for American Water Works Service Company, Inc. associates, who perform regional functions in the Corporate Office, were projected in the same manner as described above. Labor allocations include 15.80% to Iowa-American Water Company, 10.45% to American Lake Water Company, and the remaining 73.75% to Illinois-American Water Company.

Expense for the 2003 Annual Incentive Plan was included in Operations/Maintenance Labor for all exempt associates. Individual participant projections were calculated based on a range of 5.0% to 22.5% of the annual salary midpoint, depending on the associate's salary band, and then applied at a target rate of 85%. The annual salary midpoint was increased by 2.5% over 2002.

Summary of Projections

Based on the analysis described above, Operations/Maintenance Labor is projected to be \$21,313,734, and Capital and Other Labor is projected to be \$3,146,757.

Description of Workpapers

Form 168A - Line 8 reflects total projected operations/maintenance labor by month. Form 329 - Line 60 reflects capital and other labor by month.

ILLINOIS-AMERICAN WATER COMPANY

SUMMARY OF PURCHASED WATER EXPENSE PROJECTION
2003 OPERATING PROJECTION

Procedure and Assumptions

Utilizing recent historical purchased water information, a projection was made for each month of the total amount of water to be purchased. There are fourteen suppliers that provide purchased water to the Chicago Metro Division (American Lake Water Co., City of Chicago, Desplaines, DuPage Water Commission, Elmhurst, Glenview, Lisle, Lombard, Oak Lawn, Orland Park, Tinley Park, Village of Bedford Park, Wheaton, and Winfield). The source of all purchased water is Lake Michigan. Cost information was adjusted to reflect a 4% annual cost increase through 2003, based on a published planned increase from the City of Chicago.

Summary of Projections

Based on the analysis described above, Purchased Water expense is projected to be \$14,186,124.

Description of Workpapers

Form 168A - Line Number 9 reflects the monthly projections of Purchased Water expenses.

ILLINOIS-AMERICAN WATER COMPANY

SUMMARY OF FUEL AND POWER EXPENSE PROJECTION
2003 OPERATING PROJECTION

Procedure and Assumptions

Utilizing recent pumping statistics for each pumping station, a projection was made for each month of the total amount of water to be delivered to the distribution system after production uses were eliminated. Using those projections, a monthly power consumption figure per million gallons of system delivery was calculated. This calculation was based upon review of recent ratios of power consumption per million gallons of system delivery and implementation of pump efficiencies, e.g., variable frequency drives. Pump delivery performances were analyzed at each station based upon system delivery. Steps taken by the Company to control the percentage of unaccounted-for water also were reflected. The projected power consumption was then applied to projected power consumption rate schedules that reflect on or off peak power usage schedules, demand charges, projected rates and power company fuel cost adjustments. Projected power rates were based on direct correspondence with local power suppliers. Within the fourteen operating districts, there are five power utility suppliers (Ameren UE, Illinois Power Company, Cairo Public Utilities, Central Illinois Light Company, and Commonwealth Edison). None of the five power utility suppliers projected a rate increase for the year 2002. 2003 expense was adjusted to reflect an average decrease of 1.26% based on a reduction in 2003 system delivery from the 2002 plan and then a 2.5% increase on the adjusted amount.

Summary of Projections

Based on the analysis described above, Fuel and Power expense is projected to be \$5,282,516.

Description of Workpapers

Form 168A - Line Number 10 reflects the monthly projections of Fuel and Power expenses.

Notes on Power Suppliers:

| | | |
|----|-----------------|-------------------------------|
| 1 | Alton | Ameren UE |
| 2 | Cairo | Cairo Public Utilities |
| 3 | Interurban | Ameren UE, Illinois Power Co. |
| 4 | Pekin | Central Illinois Light Co. |
| 5 | Peoria | Central Illinois Light Co. |
| 6 | Lincoln | Central Illinois Light Co. |
| 7 | Champaign | Illinois Power Co. |
| 8 | Streator | ComEd |
| 9 | Sterling | ComEd |
| 10 | Pontiac | ComEd |
| 11 | Chicago Water | ComEd |
| 12 | Chicago WWater | ComEd |
| 13 | Santa Fe Water | ComEd |
| 14 | Santa Fe WWater | ComEd |

ILLINOIS-AMERICAN WATER COMPANYSUMMARY OF CHEMICAL EXPENSE PROJECTION
2003 OPERATING PROJECTIONProcedure and Assumptions

The projection of monthly system delivery used to project Fuel and Power expense was also used to project the total delivered water requiring treatment. This projection also reflects the steps taken by the Company to reduce the percentage of unaccounted-for water. Recent historical data was used to calculate internal plant treated water usage. Projected total delivered water and internal plant usage by month was then combined to determine the total treated water requirement. A review was made of changes in the water treatment process resulting primarily from compliance with Safe Drinking Water Act regulations. The most recent historical pounds per million gallons per month, adjusted to reflect changes in treatment requirements discussed above, were used to establish the usage for each chemical required in the treatment process. Monthly chemical costs were developed from the pounds per million gallons per month required to treat the total projected treated water at the established costs per pound. Individual chemical costs were established through competitive bidding on a two-year basis (2001 and 2002) for most chemicals. 2003 chemical costs, with the exception of dechlorination and carbon lease costs explained below, were adjusted to reflect an average decrease of 1.26% based on a reduction in 2003 system delivery from the 2002 plan and then a 2.5% increase on the adjusted amount.

Dechlorination costs, projected at an annual increase of 2.5% over the 2002 plan, were moved in 2003 from Waste Disposal expense to Chemical expense to more accurately reflect total chemical costs.

All monthly leased granular activated carbon (GAC) costs were then added to the projected individual monthly chemical costs. Leased GAC costs were projected at contract prices established or projected based on data obtained from manufacturers/suppliers.

Summary of Projections

Based on the analysis described above, Chemical expense is projected to be \$3,830,983.

Description of Workpapers

Form 168A - Line Number 11 reflects the monthly projections for Chemical expense.

ILLINOIS-AMERICAN WATER COMPANYSUMMARY OF WASTE DISPOSAL EXPENSE PROJECTION
2003 OPERATING PROJECTIONProcedure and Assumptions

Utilizing information based on historical data, a schedule was established for the removal of sludge from lagoon compounds constructed where treatment waste cannot be discharged into a municipal sewer system or river and for the removal and disposal of filter discharge wastes. Where treatment waste is discharged into a municipal sewer system, costs were based on volumetric municipal rates. Based upon management's review of the conditions of these lagoons, it was then determined that the lagoons at Interurban (Granite City) and Peoria (San Koty and Main Station) would require cleaning in 2003. Cost information for sludge removal was received from the last successful bidding contractors, and those costs were used, adjusted to reflect an increase of 2.5% over 2002 plan costs.

Costs also include contract waste disposal expense for wastewater collected from sanitary sewer mains in the Chicago Wastewater District and transferred to regional treatment facilities. These costs were developed based on recent historical information.

Dechlorination costs, projected at an annual increase of 2.5% over the 2002 plan, were moved in 2003 from Waste Disposal to Chemical expense to more accurately reflect total chemical costs.

Summary of Projections

Based on the analysis described above, Waste Disposal expense is projected to be \$1,761,864.

Description of Workpapers

Form 168A - Line Number 12 reflects monthly projections of waste disposal expense.

ILLINOIS-AMERICAN WATER COMPANY

SUMMARY OF MANAGEMENT FEES EXPENSE PROJECTION
2003 OPERATING PROJECTION

Procedure and Assumptions

Business plans for the national Call Center (customer service), the national Shared Services Office (financial services), regional data centers and Corporate Offices of the American Water Works Service Company (Service Company) are prepared annually in accordance with business plan procedures established by those areas of operation. From those business plans, projections were made of expenses to be charged as Management Fees during 2003.

Summary of Projections

Based on the analysis described above, Management Fees expense is projected to be \$6,843,171.

Description of Workpapers

Form 168A - Line Number 13 reflects monthly projections of Management Fees expense.

ILLINOIS-AMERICAN WATER COMPANYSUMMARY OF GROUP INSURANCE EXPENSE PROJECTION
2003 OPERATING PROJECTIONProcedure and Assumptions

Utilizing the projected associate workforce level for active associates, each associate was analyzed for projected wage levels, life insurance, optional life insurance, personal dependent coverage and medical plan (HMO, Managed Choice or Out-of-Network Comprehensive Medical). The medical plans for former Northern Illinois Water Corporation associates are PPO (same as Managed Choice) or Traditional (same as Comprehensive Medical). FAS 106 (OPEBS) expense was projected based on actuarial evaluations and is being funded in accordance with such evaluations. Projected group insurance expense was analyzed to determine reductions in operating costs resulting from calculating capital labor credits. Current and retired associates, along with dependents of deceased employees, were individually analyzed to determine the expenses to be reimbursed to the Company for said coverage. All numbers were projected on a month-by-month basis to allow for changes in levels of coverage. Individual premium rates were analyzed, and the cost of each individual type of insurance coverage was projected on the basis of an analysis of existing insurance contracts and anticipated changes.

FAS 106 expenses were projected based on System costs provided by the Corporate Office. Individual premium rates were projected to increase by 13.5% in January 2003 from the December 2002 level.

Premium and OPEBS expenses for American Water Works Service Company, Inc. associates, who perform regional functions in the Corporate Office, were projected in the same manner as described above. Premium and OPBS allocations include 15.80% to Iowa-American Water Company, 10.45% to American Lake Water Company, and the remaining 73.75% to Illinois-American Water Company.

Summary of Projections

Based on the analysis described above, Group Insurance expense is projected to be \$5,932,300.

Description of Workpapers

Form 168A - Line Number 14 reflects the projections of monthly Group Insurance expense.

ILLINOIS-AMERICAN WATER COMPANY

SUMMARY OF PENSION EXPENSE PROJECTION
2003 OPERATING PROJECTION

Procedure and Assumptions

Post-retirement pension benefit expenses were projected based on actuarial evaluations calculated in accordance with FAS 87. Similarly, the Company is funding its current annual level of pension costs based on actuarial evaluations. Projected pension expense was further analyzed to determine reductions resulting from calculating capital labor credits.

Summary of Projections

Based on the analysis described above, Pension Expense is projected to be \$2,575,060.

Description of Workpapers

Form 168A - Line Number 15 reflects projections of the monthly expense for pensions.

ILLINOIS-AMERICAN WATER COMPANY

SUMMARY OF REGULATORY EXPENSE PROJECTION
2003 OPERATING PROJECTION

Procedure and Assumptions

Monthly projected expense includes amortized regulatory expense for the three-year period March 2001 through March 2004 and amortized depreciation study expense for the five-year period March 2001 through March 2006.

Summary of Projections

Based on the analysis described above, Regulatory Expense is projected to be \$90,996.

Description of Workpapers

Form 168A - Line Number 16 reflects projections of the monthly expense for pensions.

ILLINOIS-AMERICAN WATER COMPANYSUMMARY OF INSURANCE OTHER THAN GROUP EXPENSE PROJECTION
2003 OPERATING PROJECTIONProcedure and Assumptions

Projections were made of premium costs for the various insurance policies protecting the Company and its assets. These projections were based on information provided by the American Water System Director Risk Management in the Service Company Corporate Office who is responsible for working with insurance brokers in obtaining competitive bids for the Company's insurance needs. 2003 premium costs for General Liability, Excess Liability, Workmen's Compensation and Property Insurance were based on information provided by the Director Risk Management starting with current expense, including Chicago, for policy period beginning October 2001, projected 9.7% increase in 2002 and 4.5% increase in 2003 on October anniversary dates. Other premium costs for Directors and Officers, Fiduciary, Crime, Employee Practices, and Kidnap/Ransom were also based on information provided by the Director Risk Management starting with current expense, including Chicago, for policy period beginning July 2002 and 9% increase in 2003 on July anniversary dates for each type of coverage. Projected Insurance Other Than Group expense was analyzed to determine reductions in operating costs resulting from calculating capital labor credits.

Workmen's Compensation premium expense for American Water Works Service Company, Inc. associates, who perform regional functions in the Corporate Office, were projected in the same manner as described above. Workmen's Compensation allocations include 15.80% to Iowa-American Water Company, 10.45% to American Lake Water Company, and the remaining 73.75% to Illinois-American Water Company.

In addition to annual premium expense, high losses since 1996 throughout the American System have resulted in projections beginning in 2002 for retrospective adjustments to cover prepaid insurance premium deficits. Personnel in the Service Company Corporate Office also provided the additional retrospective premium expense information.

Summary of Projections

Based on the analysis described above, Insurance Other Than Group expense is projected to be \$3,066,123.

Description of Workpapers

Form 168A - Line Number 17 reflects projections of the monthly expense for Insurance Other Than Group premiums.

ILLINOIS-AMERICAN WATER COMPANYSUMMARY OF CUSTOMER ACCOUNTING EXPENSE PROJECTION
2003 OPERATING PROJECTIONProcedure and Assumptions

Uncollectible expense was calculated by month by applying a charge-off rate to projected district-specific billed and unbilled revenues and adjusting for known changes. Dividing district-specific net charge-offs by district-specific billed revenues developed the charge-off rate

Utilizing recent historical information and projected number of customers, projections were made for the monthly costs associated with expenses related to the reading of customer meters, customer bill forms/envelopes, customer postage, processing and collecting customer bill payments, providing other customer service functions and commercial operations. Recent historical data was used to analyze expenses related to customer accounting for each month.

2003 customer postage costs reflect an annual increase of 8.8% over 2002 plan costs based on recent notification from the U.S. Post Office that first class postage will increase from 34 cents to 37 cents and assuming a similar increase for all postage classes. An annual increase of 2.5% over 2002 plan costs was used to develop remaining customer accounting costs, with three exceptions. Those exceptions are (1) 2002 plan costs were overstated in the Chicago Metro Division and reduced in 2003 by \$336,000, (2) 2002 plan includes approximately \$36,000 in miscellaneous customer accounting and telephone expenses that will not occur in 2003 due to the conversion to the national Call Center and (3) 2002 plan is understated for lock box processing fees and the 2003 plan was revised to reflect an average of March and April 2002 actual expense which was annualized and adjusted upward by 2.5%.

Summary of Projections

Based on the analysis described above, Customer Accounting expense is projected to be \$2,855,299.

Description of Workpapers

Form 168A - Line Number 18 reflects the monthly projections of Customer Accounting expense.

ILLINOIS-AMERICAN WATER COMPANY

SUMMARY OF RENTS EXPENSE PROJECTION
2003 OPERATING PROJECTION

Procedure and Assumptions

A review of all rental and lease agreements was made to ascertain monthly and yearly costs. All agreements for equipment and property subject to increase were reviewed with the property owners to determine possible increases, where applicable. An annual increase factor of 2.5% was added to those items for which projected costs could not be determined on the basis of such reviews.

Summary of Projections

Based on the analysis described, above, Rents expense is projected to be \$1,144,640.

Description of Workpapers

Form 168A - Line Number 19 reflects the projected monthly expense for Rents.

ILLINOIS-AMERICAN WATER COMPANYSUMMARY OF GENERAL OFFICE EXPENSE PROJECTION
2003 OPERATING PROJECTIONProcedure and Assumptions

A review was made of the recent historical costs associated with operating the general office functions of the Company. Based on that review, an itemized projection by month was made for such expenditures as stationery and office supplies, office cleaning services, bank service charges, other utility bills and employee-related expenses. 2003 costs reflect an increase of 2.5% over 2002 plan costs with two exceptions. Those exceptions are (1) 2003 plan reflects a reduction of \$29,000 in miscellaneous and employee expense due to the conversion to the National Call Center and (2) 2003 postage costs reflect an annual increase of 8.8% over 2002 plan costs based on recent notification from the U.S. Post Office that first class postage will increase from 34 cents to 37 cents and assuming a similar increase for all postage classes.

Summary of Projections

Based on the analysis described above, General Office expense is projected to be \$1,829,578.

Description of Workpapers

Form 168A - Line Number 20 reflects the monthly projection of General Office expense.

ILLINOIS-AMERICAN WATER COMPANYSUMMARY OF MISCELLANEOUS EXPENSE PROJECTION
2003 OPERATING PROJECTIONProcedure and Assumptions

A review was made of the recent costs associated with materials used and expenses incurred in the operation of source of supply plant, pumping plant, production plant, water treatment plant, transmission and distribution system, and administrative facilities. This review was exclusive of related labor expenses. A review was made of other recent expenses associated with outside services utilized, injury and damages expenses, employee educational expenses, legal expenses, transportation expenses and other general expenses. The Company's overall goals and programs that might affect these items were also reviewed. Projected transportation, 401K and ESOP expenses were analyzed to determine reductions in operating costs resulting from calculating capital labor credits. Based on these reviews, an itemized projection was made for expenses to be incurred in 2003. 2003 costs reflect an increase of 2.5% over 2002 plan costs with the following exceptions: (1) 401K and ESOP were analyzed individually using projected labor and Company contributions, (2) Belleville Laboratory expense explained below, and (3) ongoing security costs at an annual cost of \$6,688,892 which were not included in the 2002 plan.

A business plan for the Belleville Laboratory, which performs testing and analysis for the American System, is prepared annually in accordance with established water quality procedures. Annual projected expenses were then developed and provided by the American Water Works Corporate Office for each utility subsidiary.

401K and ESOP expenses were calculated for American Water Works Service Company, Inc. associates, who perform regional functions in the Corporate Office. 401K and ESOP allocations include 15.80% to Iowa-American Water Company, 10.45% to American Lake Water Company, and the remaining 73.75% to Illinois-American Water Company.

Summary of Projections

Based on the analysis described above, Miscellaneous expense is projected to be \$14,305,758.

Description of Workpapers

Form 168A - Line Number 21 reflects the monthly projections of Miscellaneous expense.

ILLINOIS-AMERICAN WATER COMPANYSUMMARY OF MAINTENANCE EXPENSE PROJECTION
2003 OPERATING PROJECTIONProcedure and Assumptions

Maintenance labor costs associated with the 2003-projected maintenance expenses were calculated as a part of the projection of total labor costs. Maintenance expense projections were based upon a review of historical expenditures associated with such maintenance and specific plans to complete needed maintenance projects.

Each item of maintenance was reviewed individually. All annual Company programs and long-range programs were reviewed for possible effects. A review of historical data was performed in the formulation of anticipated expenses. Adjustments were made, where appropriate, to reflect recent or new regulations for items such as flowable backfill, shoring requirements and confined space requirements. A review of the Company's utility plant investment plan was made to determine whether changes in expenses would result from the installation of new equipment, mains and services, etc. Program expenses were based on each individual program goal. Amortized program projects were reviewed for expiration or inclusion in the current and future projections. Other 2003 costs reflect an increase of 2.5% over 2002 plan costs with the exception of computer maintenance that included analyses for individual software packages, AS400 and personal computer/printer maintenance.

Summary of Projections

Based on the analysis describe above, Maintenance expense is projected to be \$5,110,288.

Description of Workpapers

Form 168A - Line Number 25 reflects the monthly projections of total maintenance costs exclusive of labor costs.

ILLINOIS-AMERICAN WATER COMPANY

SUMMARY OF DEPRECIATION EXPENSE PROJECTION
2003 OPERATING PROJECTION

Procedure and Assumptions

Established utility plant accounts and contributions in aid of construction balances were reviewed. Each account was then adjusted for additions, retirements and contributions each month based on planned construction and acquisitions. Depreciation rates established for each account were then applied to the projected plant and contribution balances by month for 2003.

Summary of Assumptions

Based on the analysis described above, Depreciation expense is projected to be \$26,098,161.

Description of Workpapers

Form 168A - Line Number 27 reflects the Depreciation projections by month.

ILLINOIS-AMERICAN WATER COMPANY
SUMMARY OF AMORTIZATION EXPENSE PROJECTION
2003 OPERATING PROJECTION

Procedure and Assumptions

A review of all projected construction improvements was made to determine if any work was to be performed on leased property or if any utility plant acquisition adjustments were projected. A review was then made of all current amortized costs, which included regulatory asset AFUDC, utility plant acquisition adjustment for the acquisition of Shiloh and amortization of Champaign municipal franchise tax. All individual amortizations were then itemized by month. Based on this review, cost changes for two items were projected: (1) correction to reflect \$13,500 for amortization of DuPage acquisition adjustment in the Chicago Metro Division and (2) \$2,494,740 for amortization of deferred security costs. No new capital leases were projected for 2003.

Summary of Projections

Based on the analysis described above, Amortization expense is projected to be \$2,581,740.

Description of Workpapers

Form 168A - Line Number 28 reflects projected monthly Amortization expenses.

ILLINOIS-AMERICAN WATER COMPANYSUMMARY OF GENERAL TAXES EXPENSE PROJECTION
2003 OPERATING PROJECTIONProcedure and Assumptions

Monthly schedules were prepared utilizing recent historical information, workforce projections, anticipated investment and capital levels and projected levels for property tax, payroll taxes, Illinois invested capital tax, franchise taxes and environmental taxes. Current and projected property tax bases were reviewed for possible future property tax increases. Projected payroll tax expense was analyzed to determine reductions in operating costs resulting from calculating capital labor credits. Reviews were made to determine possible payroll tax increases in both federal and state taxes. A review of preferred stock redemptions and expenses, long-term debt and common stock was made in determining the projected Illinois invested capital tax. The most current tax rate was utilized.

2003 property tax expense reflects an increase of 2.5% over 2002 plan expense with three exceptions. Those exceptions are (1) property tax on the land and new water treatment facility in Alton decreased due to a reassessment of property value, (2) elimination of property tax for the Company call center (CSOC) in 2003 due to projected sale of the building in 2002 after conversion to the national Call Center and (3) Interurban District enterprise zone tax abatement in Madison County that has expired.

Payroll tax expenses were calculated for American Water Works Service Company, Inc. associates, who perform regional functions in the Corporate Office. Labor allocations include 15.80% to Iowa-American Water Company, 10.45% to American Lake Water Company, and the remaining 73.75% to Illinois-American Water Company.

Summary of Assumptions

Based on the analysis described above, General Taxes expense is projected to be \$9,253,922.

Description of Workpapers

Form 168A - Line Number 29 reflects projections of General Taxes by month.

ILLINOIS-AMERICAN WATER COMPANYSUMMARY OF CAPITAL INVESTMENT PROJECTION
2003 OPERATING PROJECTIONProcedure and Assumptions

An analysis was made of the Company's utility plant in service to ascertain the necessary items to be replaced and added for 2003. This projection was based on wear and tear, decay, action of the elements, inadequacy, obsolescence, change in demand, requirements of public authorities, compliance with the Safe Drinking Water Act, efficiencies and the Company's established goals and long-range programs. The projected utility plant items were identified either as recurring items or Investment Projects. All items were then segregated into categories based upon the type of work to be performed or equipment to be purchased. The Company's management staff and the System Company engineering staff prior to inclusion in the projection reviewed the Investment Project section of the capital investment projection, based on a detailed listing of all larger projects.

Utilizing recent historical information, cost projections were made for labor-intensive items based on the time required to replace or add each item. Wage rates utilized to prepare operations and maintenance labor was applied to project all Company capital labor costs. Vendors and contractors were contacted for current and projected costs for property items such as new and replacement services, hydrants, meters and meter installations. Where appropriate, projected unit increases were reconciled with projected customer growth. 2003 recurring investment item costs reflect an annual increase of 2.5% over the original approved 2002 plan.

Summary of Projections

Based on the analysis described above, the gross additions to utility plant in service are projected to be \$37,101,255 in 2003.

Description of Workpapers

Form 993 reflects the annual projection of capital investment for the Company.

ILLINOIS COMMERCE COMMISSION

EXHIBIT NO. 5.0

DIRECT TESTIMONY OF

JOSEPH D. HARRIS

ILLINOIS-AMERICAN WATER COMPANY

**DIRECT TESTIMONY
OF
JOSEPH D. HARRIS**

EXHIBIT NO. 5

1 **Q. Please state your name.**

2 A. Joseph D. Harris.

3 **Q. Please state your business address.**

4 A. 300 North Water Works Drive, Belleville, Illinois 62223.

5 **Q. By whom are you employed and in what capacity?**

6 A. I am employed as Senior Financial Analyst by American Water Works Service Company, Inc.
7 ("Service Company"), an affiliate of Illinois-American Water Company ("Illinois American" or
8 "Company"). I also serve as Assistant Treasurer and Assistant Comptroller of Illinois-
9 American.

10 **Q. Please summarize your higher education experience.**

11 A. I received a Bachelor of Science degree, with a major in Accounting, from Eastern Illinois
12 University in 1981. I am a Certified Public Accountant.

13 **Q. Please summarize your employment experience.**

14 A. I joined Northern Illinois Water Corporation ("NIWC") in February 1982 as Staff Accountant.
15 In January 1986, I became Chief Accountant of NIWC. Upon acquisition of NIWC by
16 Illinois-American in 1999, I became Comptroller of Illinois-American. In April, 2002, following
17 the consolidation of the Accounting functions of the Company into the American Shared
18 Services Center, I became Senior Financial Analyst with the Service Company and Assistant
19 Comptroller of Illinois-American.

1 **Q. Are you a member of any industry or professional associations?**

2 A. Yes. I am a member of the American Institute of Certified Public Accountants and the Illinois
3 State CPA Society.

4 **Q. Please summarize your responsibilities as Senior Financial Analyst.**

5 A. My responsibilities primarily involve the preparation of applications for rate adjustments with the
6 Illinois Commerce Commission (the "Commission"). I am also responsible for budget
7 preparation and financial analysis.

8 **Q. Have you testified before this Commission in prior rate cases?**

9 A. Yes, in rate cases of NIWC.

10 **Q. Are you generally familiar with the operations, books and records of Illinois-**
11 **American?**

12 A. Yes.

13 **Q. Has the Company submitted the "B" schedules required in Subpart E of the proposed**
14 **revised Standard Filing Requirements applicable to this case?**

15 A. Yes. These schedules are contained in Exhibit No. 11.0.

16 **Q. Did you prepare, or cause to be prepared under your direction and supervision, certain**
17 **of the "B" schedules?**

18 A. Yes.

1 **Q. Which “B” schedules did you prepare or cause to be prepared?**

2 A. Schedules B-9, Accumulated Deferred Income Taxes; B-9.1, Detailed Listing of Balance Sheet
3 Assets and Liabilities; and a portion of Schedule B–10, Deferred Charges.

4 **Q. Did you prepare or cause to be prepared these schedules from the books and records
5 of the Company?**

6 A. Yes.

7 **Q. Please generally describe these schedules.**

8 A. Schedule B-9 shows accumulated deferred income taxes. Schedule B-9.1 provides detail in
9 support of accumulated deferred income taxes. Schedule B-10 shows a calculation of deferred
10 charge items included in rate base.

11 **Q. Has the Company submitted the “C” schedules required in Subpart F of the proposed
12 revised Standard Filing Requirements applicable to this case?**

13 A. Yes. These schedules are contained in Exhibit No. 12.0.

14 **Q. Did you prepare, or cause to be prepared under your direction and supervision certain
15 of the “C” schedules?**

16 A. Yes.

17 **Q. Which “C” schedules did you prepare or cause to be prepared?**

18 A. Schedules C-5, Income Taxes; Schedule C-5.1, Consolidated Federal Income Tax Return;
19 Schedule C-5.2, Deferred Income Tax Expense; Schedule C-5.3, Differences between Book
20 and Tax Depreciation; and a portion of Schedule C-26, Amortization of Deferred Charges.

1 **Q. Did you prepare or cause to be prepared these schedules from the books and records**
2 **of the Company?**

3 A. Yes.

4 **Q. Please generally describe these schedules**

5 A. Schedule C-5 provides the calculation of federal and state income tax; Schedule C-5.1
6 discusses the allocation of consolidated federal income tax; Schedule C-5.2 shows the
7 calculation of deferred income tax expense; Schedule C-5.3 shows the calculation of the
8 differences between book and tax depreciation and the calculation of deferred income taxes
9 attributable to these differences; and Schedule C-26 provides information on amortization of
10 deferred charges.

11 **Q. You testified that you prepared or caused to be prepared a portion of Schedules B-10**
12 **and C-26. Please explain your statement.**

13 A. In his direct testimony, Exhibit No. 3.0, Mr. Johnson explained why temporary reverse osmosis
14 treatment was required in 2001 in the Streator District. The cost of this temporary treatment
15 was \$497,000.

16 The Company has recorded this cost item as a deferred charge. It proposes to amortize this
17 deferred cost item in revenue requirements over a three-year period, and to include the
18 unamortized balance in rate base.

1 **Q. Is there precedent for the Company's proposal?**

2 A. Yes. In 1993, NIWC incurred significant expense at Streator investigating various alternatives
3 to deal with high nitrate conditions in the Vermillion River, the source of supply for Streator. In
4 his direct testimony, Mr. Johnson describes that work.

5 NIWC recorded the costs of that investigation as a deferred charge and, in its rate case in
6 Docket No. 93-0184, requested that the cost be amortized in revenue requirements, with the
7 amortized balance included in rate base.

8 The Commission agreed and allowed NIWC to amortize the cost in rates, with the unamortized
9 balance included in rate base.

10 Illinois-American has followed this precedent in dealing with the reverse osmosis expense.

11 **Q. Is there another item which you included in Schedules B-10 and C-26?**

12 A. Yes. Through 2002 only, we are deferring steel structure painting costs. The annual
13 amortization of this item is included in Schedule C-26 and the unamortized balance in Schedule
14 B-10. Beginning 2003, the Company proposes to expense a normalized level of steel structure
15 painting costs, as discussed in the testimony of Mr. Johnson.

16 **Q. Does this conclude your testimony?**

17 A. Yes.

ILLINOIS COMMERCE COMMISSION

EXHIBIT NO. 6.0

DIRECT TESTIMONY OF

MICHAEL A. RUMER

ILLINOIS-AMERICAN WATER COMPANY

**DIRECT TESTIMONY
OF
MICHAEL A. RUMER**

EXHIBIT NO. 6.0

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Q. Please state your name.

A. Michael A. Rumer.

Q. Please state your business address.

A. 300 North Water Works Drive, Belleville, Illinois 62223.

Q. By whom are you employed and in what capacity?

A. I am employed by Illinois-American Water Company (“Illinois-American” or “Company”) as a Financial Analyst.

Q. Please summarize your higher education experience.

A. I graduated from Indiana University in 1987 with a Bachelor of Science Degree in Business Administration, with an Accounting major. In 1991, I attended the Western Utility Rate Seminar sponsored by the National Association of Regulatory Utility Commissioners, the California Public Utilities Commission and the University of Utah. I have participated in various continuing education programs sponsored by American Water Works Service Company, Inc. (the “Service Company”), an affiliate of Illinois-American.

Q. Please summarize your employment experience.

A. In 1979, I began my employment with the Service Company in Richmond, Indiana as a Junior Accountant in the Property Accounting Department. In September 1981, I became the Supervisor of that same department. My responsibilities included overseeing the processing of

1 work orders, maintenance of Continuing Property Records (“CPR”) and the reserves for book
2 and accelerated depreciation and all other accounts associated with Utility Plant In Service
3 (“UPIS”) for twenty-one operating Districts in the Mid-America Region of the Service
4 Company. In July 1989, I accepted the position of Rate Analyst in the Rates and Revenue
5 Department and was promoted to Senior Rate Analyst in July 1991. In October 1993, I
6 transferred to Illinois-American as a Senior Rate Analyst and was promoted to Revenue
7 Requirement Specialist in July 1995. My title was changed to Financial Analyst in April 2002.

8 **Q. Please summarize your responsibilities as Financial Analyst.**

9 A. My present duties consist of preparing, and assisting in the presentation, of filings for rate
10 adjustments, and performance of various budgeting functions, for Illinois-American.

11 **Q. Have you testified before this Commission in prior rate cases of the Company?**

12 A. Yes.

13 **Q. Have you testified before other regulatory commissions in prior rate cases of other**
14 **subsidiaries of American Water Works Company?**

15 A. Yes. I have testified in rate cases before the Ohio Public Utilities Commission and the Indiana
16 Utility Regulatory Commission.

17 **Q. Are you generally familiar with the operations, books and records of Illinois-**
18 **American?**

19 A. Yes.

1 **Q. Has the Company submitted the schedules required in Subpart D of the proposed**
2 **revised Standard Filing Requirements applicable to this case?**

3 A. Yes. These schedules are contained in Exhibit 10.0.

4 **Q. Were the schedules contained in Exhibit 10.0 prepared by you or under your direction**
5 **and supervision?**

6 A. Yes.

7 **Q. Was the information contained in Exhibit 10.0 obtained or derived from the books and**
8 **records of the Company?**

9 A. Yes.

10 **Q. To the best of your knowledge, information and belief, is the accounting information**
11 **contained in these schedules true and correct?**

12 A. Yes.

13 **Q. Please describe Schedule A-1 of Exhibit 10.0.**

14 A. Schedule A-1 provides a summary of standard information requirements such as the areas
15 requesting a change in rates, utility representatives and contacts including telephone numbers
16 and addresses.

17 **Q. Please describe Schedule A-2 of Exhibit 10.0.**

18 A. Schedule A-2 is an Overall Financial Summary of all of the "B" Schedules (Exhibit No. 11.0),
19 "C" Schedules (Exhibit No. 12.0) and "D" Schedules (Exhibit No. 13.0) of the proposed
20 revised Standard Filing Requirements applicable to this case. It also shows the additional

1 revenue requirement to be recovered from the proposed rates. This schedule shows the
2 information by rate service area as well as for total company.

3 **Q. Please describe Schedule A-2.1 of Exhibit 10.0.**

4 A. Schedule A-2.1 contains the computation of the jurisdictional gross revenue conversion factor.

5 **Q. Please describe Schedule A-3 of Exhibit 10.0.**

6 A. Schedule A-3 provides a comparison of revenue at present rates and revenue at proposed
7 rates.

8 **Q. Please describe Schedule A-4 of Exhibit 10.0.**

9 A. Schedule A-4 compares jurisdictional information contained in Schedule A-2, Overall Financial
10 Summary, with the findings by the Commission in the Company's prior rate order, together with
11 a brief explanation of the changes in conditions which necessitate the requested rate increase.

12 **Q. Please describe Schedule A-5 of Exhibit 10.0.**

13 A. Schedule A-5 provides a jurisdictional allocation cost summary based on costs for the test year.

14 **Q. Has the Company submitted the "E" schedules required in Subpart H of the proposed**
15 **revised Standard Filing Requirements applicable to this case?**

16 A. Yes. These schedules are contained in Exhibit No. 14.

17 **Q. Were the schedules contained in Exhibit No. 14 prepared by you or under your**
18 **direction and supervision?**

19 A. Yes.

1 **Q. Was the information contained in Exhibit No. 14 obtained or derived from the books**
2 **and records of the Company?**

3 A. Yes.

4 **Q. To the best of your knowledge, information and belief, is the accounting information**
5 **contained in these schedules true and correct?**

6 A. Yes.

7 **Q. Please describe Schedule E-1 of Exhibit 14.0.**

8 A. Schedule E-1 contains the present rate schedules which the Company proposes to revise.

9 **Q. Please describe Schedule E-2 of Exhibit 14.0.**

10 A. Schedule E-2 contains the proposed rate schedules filed in this proceeding.

11 **Q. Please describe Schedule E-3 of Exhibit 14.0.**

12 A. This schedule contains copies of present rate schedules scored to show the proposed changes.

13 **Q. Please describe Schedule E-4 of Exhibit 14.0.**

14 A. This schedule contains the Statement of Changes which was filed with the proposed tariffs and
15 summarizes the rationale underlying the proposed changes.

16 **Q. Please describe Schedule E-5 of Exhibit 14.0.**

17 A. Schedule E-5 shows the billing units by rate class for the historic year, current year and test
18 year.

1 **Q. Please describe Schedule E-6 of Exhibit No. 14.0**

2 A. Schedule E-6 provides detailed information as to revenue by rate class at current rates
3 compared with proposed rates.

4 **Q. Has the Company submitted an embedded cost of service study?**

5 A. No. The Company has proposed an across-the-board rate increase. As provided in Section
6 285.5305 of the proposed revised Standard Filing Requirements, the requirement for filing an
7 embedded cost of service study is waived where the utility provides the necessary data
8 referenced in subsections (b), (c) and (d) to enable Staff to perform a cost of service study.
9 The Company has made such data available to Staff.

10 **Q. Please describe Schedule E-9 of Exhibit No. 14.0.**

11 A. Schedule E-9 provides bill comparisons for the different rate classes.

12 **Q. How were the changes in the Charges for Municipal Franchise Fees determined?**

13 A. The Charges for Municipal Franchise Fees are based upon water revenues and the number of
14 customers within the franchise boundaries. Therefore, as the franchise revenues increase or
15 decrease, the fees to recover those revenues will correspondingly increase or decrease.
16 Similarly, as the customer base increases, the fees become less, since the revenues being
17 recovered are shared by a greater number of customers.

1 **Q. Is the Company proposing any changes to certain miscellaneous tariff charges for the**
2 **Lincoln District and the Chicago-Metro Division, formerly Citizens Utilities Company**
3 **of Illinois?**

4 A. Yes. For uniformity, the Company is proposing to make applicable to Lincoln District and the
5 Chicago-Metro Division its tariff provisions for a non-sufficient funds (NSF) charge and service
6 reconnection charges and a late payment charge in Lincoln District. The Company's current
7 charges for these items were approved in Docket Nos. 97-0102 and 97-0081, Cons., based
8 upon cost studies. The late payment charge is authorized by 83 Ill. Adm. Code § 280.90. The
9 costs incurred by the Company for NSF and service reconnections during normal business
10 hours are not materially different for Lincoln District or the Chicago-Metro Division than for the
11 Northern and Southern Divisions. The \$15 NSF charge was developed based on the cost of
12 labor and labor-related expenses (approximately \$8); forms and postage (approximately \$3);
13 and bank charges (approximately \$4). The reconnection charge during normal business hours
14 was developed based upon labor for outside commercial department employees (\$15); clerical
15 employees (\$4); labor-related expenses (\$11); and transportation, postage, forms and other
16 materials (\$2).

17 **Q. Is the Company proposing any changes to the Sewage Treatment Plant Connection**
18 **Fee?**

19 A. Yes. The current average project unit cost of \$658.00 per population equivalent (PE) is based
20 on 1995 construction costs. The Company is proposing to increase this fee to \$831.76 per PE
21 based on the Construction Cost Index at June 2002, as published in the *Engineering News*
22 *Record*.

1 **Q.** **Does this conclude your testimony?**

2 **A.** **Yes.**

ILLINOIS-AMERICAN WATER COMPANY

Direct Testimony

of

Paul R. Moul, Managing Consultant
P. Moul & Associates

Concerning

Cost of Equity

Illinois-American Water Company
Direct Testimony of Paul R. Moul
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ILLINOIS COMMERCE COMMISSION**DOCKET NO. 02-****PREPARED DIRECT TESTIMONY OF PAUL R. MOUL****SEPTEMBER 1, 2001****I. INTRODUCTION AND SUMMARY OF RECOMMENDATION**

1 **I. INTRODUCTION AND SUMMARY OF RECOMMENDATION**
2 1. Q. Please state your name and address.

3 A. My name is Paul Ronald Moul. My business address is 251 Hopkins
4 Road, Haddonfield, NJ 08033-3062. I am Managing Consultant of the
5 firm P. Moul & Associates, an independent, financial and regulatory
6 consulting firm. My educational background, business experience and
7 qualifications are provided in IAWC Exhibit 7.1 that follows my direct
8 testimony.

9 2. Q. What is the purpose of your testimony?

10 A. My testimony presents evidence, analysis, and a recommendation
11 concerning the rate of return on common equity that the Illinois
12 Commerce Commission (“ICC” or the “Commission”) should allow
13 Illinois-American Water Company (“IAWC” or the “Company”) an
14 opportunity to earn on its rate base. My analysis and recommendation is
15 supported by the detailed financial data contained in IAWC Exhibit 8.0,
16 which is a multi-page document that is divided into twelve (12) schedules.
17 Additional evidence, in the form of appendices, follows my direct
18 testimony, and is incorporated herein by reference. Those appendices deal

19 with the technical aspects of my testimony and are identified as IAWC
20 Exhibits 7.2 through 7.9.

21 3. Q. Based upon your analysis, what is your conclusion concerning the
22 appropriate rate of return on equity for IAWC in this case?

23 A. My conclusion is that the Company should be afforded an opportunity to
24 earn a rate of return on common equity of at least 11.015%. My
25 recommended rate of return on common equity of 11.015% is used in
26 conjunction with the capital structure ratios and senior capital cost rates
27 developed by Mr. Frederick L. Ruckman, the Company's Vice President
28 and Treasurer. The post-tax overall rate of return is 8.01% and is shown
29 on Schedule 1 of IAWC Exhibit 8.0. When applied to the Company's rate
30 base, this rate of return will compensate investors for the use of their
31 capital and allow the Company to attract new capital based on its own
32 financial profile.

33 4. Q. How is your testimony organized?

34 A. I have addressed the following issues and organized my testimony as
35 follows:

36 I. Introduction and Summary of Recommendation

37 II. Water Utility Risk Factors

38 III. Fundamental Risk Analysis

39 IV. Cost of Equity -- General Approach

40 V. Discounted Cash Flow Analysis

41 VI. Risk Premium Analysis

VII. Capital Asset Pricing Model

VIII. Credit Quality Issues and Conclusion

42 VII. Capital Asset Pricing Model
43 VIII. Credit Quality Issues and Conclusion
44 5. Q. How have you determined the cost of equity in this case?

45 A. In arriving at my recommended cost of equity, I employed capital market
46 and financial data relied upon by investors to assess the relative risk, and
47 hence the cost of equity, for a public utility, such as IAWC. In this regard,
48 I relied on three well-recognized market-determined measures: the
49 Discounted Cash Flow ("DCF") model, the Risk Premium analysis, and
50 the Capital Asset Pricing Model ("CAPM"). I have also considered the
51 Comparable Earnings approach, but did not use those results directly in
52 my recommended rate of return on common equity. It is my
53 understanding that in recent years the ICC has not taken the Comparable
54 Earnings approach into account in determining the cost of common equity.
55 The results of my application of the Comparable Earnings approach are
56 provided in IAWC Exhibit 7.9 and have been used for confirmation
57 purposes.

58 By considering the results of a variety of approaches, I determined
59 that an 11.015% rate of return on common equity for IAWC is reasonable,
60 and indeed represents the minimum required return for the Company.
61 This is consistent with well-recognized principles for determining a fair
62 rate of return. In this regard, the Commission should consider the
63 principles that I have set forth in IAWC Exhibit 7.2. The end result of the
64 rate of return finding by the Commission must cover the Company's

65 interest and dividend payments, provide a reasonable level of earnings
66 retention, produce an adequate level of internally generated funds to meet
67 capital requirements, be commensurate with the risk to which IAWC's
68 capital is exposed, and support reasonable credit quality.

69 6. Q. What market evidence have you considered in measuring the cost of
70 equity in this case?

71 A. The models that I used to measure the cost of equity for the Company
72 were applied with market data developed from two proxy groups. The
73 first proxy group consists of six publicly traded water companies. I will
74 refer to these companies as the "Water Group" throughout my testimony.
75 I have not separately measured the cost of equity for component
76 companies of the Water Group. Rather, by employing group average data
77 for the Water Group, I have minimized the effect of any anomalies in the
78 market data for an individual company. I have also taken this position
79 because the determination of the cost of equity for an individual company
80 has become increasingly problematic because consolidation in the utility
81 industry has altered the valuation perspective of investors that is not
82 necessarily related to the underlying fundamentals of a firm.

83 I have not analyzed the market data for American Water Works
84 Company, Inc. ("AWW"), which is the parent company of IAWC, because
85 it is currently the target of an acquisition. On September 16, 2001, AWW
86 entered into an agreement with RWE Aktiengesellschaft ("RWE") whereby
87 Thames Water, the UK subsidiary of RWE, would merge with AWW.

88 The cash purchase price of AWW's stock represented a 36.5% premium
89 over the stock's average price for the 30 trading days prior to the
90 announcement. Since that time, AWW's stock reflects the pending
91 acquisition premium and it would be unsuitable to measure the cost of
92 equity in this case.

93 The second proxy group consists of natural gas distribution
94 companies. I will refer to them as the "Gas Distribution Group"
95 throughout my testimony. The Commission is familiar with three of these
96 companies and the one additional company has operations nearby.
97 Natural gas distribution companies provide additional evidence of the cost
98 of equity in this case because the number of water companies with traded
99 stocks continues to decline due to consolidation in the industry.

100 7. Q. Please summarize the basis for your recommended cost of equity in this
101 proceeding?

102 A. By considering the results of a variety of approaches, I determined the cost
103 of equity consistent with well-recognized principles for determining a fair
104 rate of return. My cost of equity determination was derived from the
105 results of the methods/models identified above. In general, the use of
106 more than one method provides a superior foundation to arrive at the cost
107 of equity. Moreover, at any point in time, individual methods may
108 provide an incomplete measure of the cost of equity depending upon a
109 variety of extraneous factors which may influence market sentiment. The

110 following table provides a summary of the indicated costs of equity using
111 each of the three approaches.

| 112 | | Water | Gas Distribution |
|-----|--------------|--------------|------------------|
| 113 | | <u>Group</u> | <u>Group</u> |
| 114 | | | |
| 115 | DCF | 9.68% | 11.97% |
| 116 | Risk Premium | 12.00% | 12.25% |
| 117 | CAPM | 13.13% | 12.26% |

118 8. Q. You indicated that your recommendation represents the minimum level of
119 required equity return for the Company. What factors cause you to reach
120 that conclusion?

121 A. The cost of equity data presented above does not reflect fully the
122 compensation that a utility is entitled to when determining a fair rate of
123 return on common equity. For example, I have not directly incorporated
124 the results from the Comparable Earnings analysis into my
125 recommendation. Had these results been included in the measures of the
126 cost of equity shown above, the results would have been higher.

127 9. Q. How have you used these data to determine cost of equity for the
128 Company in this case?

129 A. I have analyzed the market-determined models of the cost of equity using
130 a series of combinations. Those results are:

| | | | |
|-----|--------------|--------------|------------------|
| 131 | | Water | Gas Distribution |
| 132 | | <u>Group</u> | <u>Group</u> |
| 133 | | | |
| 134 | DCF and RP | 10.84% | 12.11% |
| 135 | DCF and CAPM | 11.41% | 12.12% |
| 136 | Average | 11.13% | 12.12% |

137 From these combinations of the cost of equity and other factors, I have
 138 determined that a reasonable range of the cost of equity is 10.84% to
 139 12.12%. From this range, the Company's allowed rate of return on
 140 common equity should be at least 11.00%. To this cost rate, I have added
 141 an increment to reflect the flotation costs associated with the Company's
 142 recent issuance of common stock. In connection with this issuance, the
 143 Company paid an \$112,500 assessment to the ICC. The Company is
 144 entitled to recovery of this expense in its rate of return on common equity.
 145 In this regard, the common stock issuance cost allowance is 0.015%
 146 ($\$112,500 \div 3 = \$37,500 \div \$243,632,832$) over the effective period of the
 147 proposed rates. This recovery is reasonable because it is compatible to the
 148 issuance expenses reflected in the embedded cost at long-term debt. Use
 149 of an 11.015% (11.00% + 0.015%) rate of return on common equity in
 150 computing the Company's revenue requirements in this case will help
 151 minimize the magnitude of the proposed rate increase.

152 **II. WATER UTILITY RISK FACTORS**

153 10. Q. What background information concerning the Company have you
 154 considered as part of your testimony?

155 A. IAWC is a wholly owned subsidiary of AWW, the nation's largest water
156 utility holding company. AWW has 25 water utility subsidiaries that
157 operate in 23 states. Even though the stock of AWW is presently traded
158 on the New York Stock Exchange ("NYSE"), it will be acquired by RWE
159 in the near future.

160 IAWC provides service to its customers through thirty-six water
161 supply districts and eighteen wastewater districts organized in four
162 divisions. The Company meets its customer's needs through both surface
163 and ground water supplies. In 2001, IAWC provided water service to
164 approximately 220,000 customers. The 2002 acquisition of customers
165 from Citizens Communications has added about 48,000 water and 36,000
166 wastewater customers. Over the years, the Company has acquired a
167 number of systems from other companies. The acquisition of the water
168 and wastewater assets of Citizens Communications is the most recent
169 example.

170 In 2001, the Company's water sales were represented by
171 approximately 37% to residential, 18% to commercial, 20% to industrial,
172 9% to public authorities, and 16% to resale customers. Combined, sales to
173 industrial customers and sales for resale represent 36% of total sales.
174 While representing a significant portion of sales, these customers comprise
175 less than one-quarter of one-percent of the Company's customers (i.e., 476
176 customers). As explained in the testimony of Mr. Ruckman, the Company
177 faces competitive and bypass threats from some commercial, industrial

178 and resale customers. This means that the water demands of a few
179 customers can have a significant impact on the Company's operations.

180 11. Q. Please identify some of the risk factors which impact the water utility
181 industry.

182 A. The business risk of the water utilities has been strongly influenced by
183 water quality concerns. With the passage of the Safe Drinking Water Act
184 Amendments of 1996 ("SDWA"), which re-authorized the SDWA for the
185 second time since its original passage in 1974, the SDWA instituted
186 policies and procedures governing water quality. Significant aspects of
187 the 1996 Act provide that the Environmental Protection Agency ("EPA"),
188 in conjunction with other interested parties, will develop a list of
189 contaminants for possible regulation and must update that list every 5
190 years. From that list, EPA must select at least five contaminants and
191 determine whether to regulate them. This process must be repeated every
192 five years. The EPA may bypass this process and adopt interim
193 regulations for contaminants which pose an urgent health threat.

194 The current priorities of the EPA include regulations directed to:
195 (i) microbials, disinfectants and disinfection byproducts, (ii) radon, (iii)
196 radionuclides, (iv) ground water, and (v) arsenic. The regulations which
197 emanate from the EPA concerning certain potentially hazardous
198 substances noted above, together with the Federal Clean Water Act and
199 the Resource Conservation and Recovery Act, will bear upon the risk of
200 all water utilities. Most of these regulations affect the entire water industry

201 in contrast with certain regulations issued pursuant to the Clean Air Act,
202 which may impact only selected electric utilities. This business risk
203 factor, together with the important role which water service facilities
204 represent within the infrastructure, underscores the public policy concerns
205 which are focused on the water utilities. Moreover, since September 11,
206 2001, water utilities are operating on heightened alert to protect drinking
207 water supplies. Many water utilities, including IAWC, have taken
208 additional security safeguards including (i) limiting access to treatment
209 and storage facilities, (ii) conducting additional testing and monitoring,
210 (iii) reassessing security procedures and systems, and (iv) providing
211 additional training to their personnel. The security measures which have
212 been taken by water utilities to safeguard the public water supply place
213 them in a category similar to the electric utilities that are concerned with
214 protecting the nation's energy supply.

215 12. Q. How do these issues impact the water utility industry?

216 A. Managers of water utilities have in the past and will in the future focus
217 increased attention on environmental and related regulatory issues.
218 Drinking water quality has also received heightened attention out of
219 concern over the integrity of the source of supply which is often
220 threatened by changing land use, the permissible level of discharged
221 contaminants established by state and federal agencies, and now potential
222 threats from terrorist. Moreover, water companies have experienced
223 increased water treatment and monitoring requirements and escalating

costs in order to comply with the increasingly stringent regulatory requirements noted above. Water utilities may also be required to expend resources to undertake research and employ technological innovations to comply with potential regulatory requirements. These factors are symptomatic of the changing business risk faced by water utilities. The importance of drinking water quality on public health reached headline proportions surrounding problems encountered in Milwaukee, Wisconsin, New York City, and Washington, DC. These situations have increased the perceived risk of water utilities to investors.

13. Q. Are there other factors that influence the business risk of water utilities?

A. Yes. Being the sole purveyor of potable water from an established infrastructure does not insulate a water utility's operations from general business conditions, regulatory policy, the influence of weather, and customers' usage habits. It is also important to recognize that water companies face higher degrees of capital intensity than other utilities, more costly waste disposal requirements and threats to its source of supply. The headlines surrounding MTBE contamination and the regulation of arsenic are cases-in-point.

14. Q. Are there other structural issues that affect the business risk of water utilities?

A. Yes. As noted above, the high fixed cost of water utilities makes earnings vulnerable to significant variations when usage fluctuates with weather, the economy, and customer conservation efforts. While the wise use of

247 water is always the objective, the business risk of the water utility industry
248 can be affected by increased customer awareness of conservation.
249 Moreover, current building standards have mandated the use of fixtures
250 that must comply with more stringent water use requirements.

251 15. Q. Please identify some of the specific water utility risk factors which impact
252 the Company.

253 A. The Company must conform its operations to the requirements of the
254 SDWA and Enhanced Surface Water Treatment Rule, ("ESWTR"), which
255 include monitoring and testing, compliance with the lead and copper rule,
256 regulation of Disinfection/Disinfection By-Products ("DDBP"), and other
257 contaminants. Attention to security has also moved to the forefront for the
258 Company. Moreover, high capital intensity is a characteristic typically
259 found in the water utility business. In this regard, IAWC's investment in
260 net plant is 3.32 times its annual revenue, which is higher than the Water
261 Group's figure of 2.97 times. In comparison, the Gas Distribution
262 Group's investment in net plant is only 0.74 times its annual revenue.

263 16. Q. How have the bond rating agencies viewed the business risks facing water
264 utilities?

265 A. S&P has established a risk-adjusted or matrix approach to the financial
266 benchmarks used to assess the credit quality of all regulated public
267 utilities, including water utilities. For some time, S&P has applied a
268 matrix approach which adjusts its financial benchmarks according to each
269 company's business risk profile. That is to say, more lenient criteria are

270 applied to companies with lower business risk, whereas more stringent
271 criteria are applied to companies with higher business risk. In this regard,
272 S&P has categorized each water utility according to an assessment of its
273 business risk. This risk evaluation has been expressed by business profile
274 assignments that are intended to represent a specific level of business risk.
275 Each regulated firm is assigned to a category on a scale of 1 (strong) to 10
276 (weak). That is to say, a business profile “1” equates to the lowest
277 business risk, while business profile “10” equates to the highest business
278 risk. In assigning a business profile, S&P has enumerated the key items it
279 considers: regulation, markets, operations, competitiveness, and
280 management.

281 According to S&P, the business profiles of the water utility
282 industry range from “2” to “4.” The Water Group’s average business
283 profile is “3.” The average business profile of the Gas Distribution Group
284 is also “3.” IAWC has not been assigned a business profile by S&P, but in
285 my opinion it would not be higher than the “3” shown by the Water Group
286 and Gas Distribution Group.

287 17. Q. How is the Company’s risk profile affected by its construction program?

288 A. The Company is engaged in a continuing capital expenditure program
289 necessary to fulfill the needs of its customers and to comply with various
290 regulations. For the future, the Company expects its capital expenditures,
291 net of customer advances to be:

| | | |
|-----|-------|----------------------|
| 292 | | Capital |
| 293 | | <u>Expenditures</u> |
| 294 | | |
| 295 | 2002 | \$ 27,986,560 |
| 296 | 2003 | 31,931,818 |
| 297 | 2004 | 27,664,380 |
| 298 | 2005 | 26,923,195 |
| 299 | 2006 | <u>25,211,286</u> |
| 300 | | |
| 301 | Total | <u>\$139,717,239</u> |

302 Over the next five years, these capital expenditures will represent an
303 approximate 40% ($\$139,717,239 \div \$347,776,000$) increase in net utility
304 plant (less contributions in aid of construction) from the levels at
305 December 31, 2001. It is noteworthy that the Company's capital
306 expenditures for the replacement of its infrastructure, to meet the
307 requirements of the SDWA, and to implement additional security
308 measures generally are not revenue producing. As noted previously, a fair
309 rate of return for the Company represents a key to a financial profile that
310 will provide the Company with the ability to raise the capital necessary to
311 meet its capital needs on an ongoing basis.

312 18. Q. How should the Commission respond to the evolving business
313 environment facing the Company?

314 A. The Company is faced with the requirement to invest in new facilities and
315 to maintain and upgrade existing facilities in its service territories.
316 Security issues are also a significant concern at this time. Where a
317 substantial ongoing capital investment is required to meet the high quality

318 of product and service that customers demand, supportive regulation is
319 absolutely essential.

320 **III. FUNDAMENTAL RISK ANALYSIS**

321 19. Q. Is it necessary to conduct a fundamental risk analysis to provide a
322 framework for a determination of a utility's cost of equity?

323 A. Yes. It is necessary to establish a company's relative risk position within
324 its industry through a fundamental analysis of various quantitative and
325 qualitative factors that bear upon investors' assessment of overall risk.
326 The qualitative factors which bear upon the Company's risk have already
327 been discussed in Section II. The quantitative risk analysis follows in this
328 Section III. The items that influence investors' evaluation of risk and their
329 required returns are described in IAWC Exhibit 7.3. For this purpose, I
330 have compared IAWC to the S&P Public Utilities, an industry-wide proxy
331 consisting of various regulated businesses, to the Water Group, and to the
332 Gas Distribution Group.

333 20. Q. What are the components of the S&P Public Utilities?

334 A. The S&P Public Utilities is a widely recognized index which is comprised
335 of electric power and natural gas companies. These companies are
336 identified on page 3 of Schedule 5 of IAWC Exhibit 8.0. I have used this
337 group as a broad-based measure of all types of utility companies.

338 21. Q. What criteria did you employ to assemble your first comparison group?

339 A. The Water Group that I employed in this case includes companies that are
340 engaged in similar business lines to IAWC and have publicly-traded

341 common stock. The Water Group companies have the following common
342 characteristics: (i) they are listed in Edition 9 of The Value Line
343 Investment Survey in the section “Water Utility Industry” (ii) their stock is
344 publicly-traded, (iii) they have not reduced or omitted their dividend, and
345 (iv) they are not currently involved in a publicly-announced merger or
346 acquisition. As explained previously, I have excluded AWW from the
347 Water Group because it has announced plans to be acquired by RWE of
348 Essen, Germany. It would be inappropriate to include a company that is
349 being acquired in a proxy group because the stock price of that company
350 usually disconnects from its underlying fundamentals. I will discuss this
351 issue in further detail later in my testimony. The Water Group includes
352 American States Water Co., California Water Service Group, Connecticut
353 Water Services, Middlesex Water Company, Philadelphia Suburban Corp.,
354 and SJW Corp. Other water companies, such as Artesian Resources,
355 Birmingham Limited, Pennichuck Corp., and York Water Co. were not
356 included in my Water Group because they are not part of the Value Line
357 publication. In addition, Pennichuck Corp. is presently the target of an
358 acquisition by Philadelphia Suburban Corporation. Southwest Water
359 which is included in Value Line was eliminated from the Water Group
360 because of a dividend reduction which is unusual for a water company.

361 22. Q. What criteria did you employ to assemble your Gas Distributions Group?

362 A. The Gas Distribution Group that I employed in this case includes
363 companies that are engaged in the distribution of natural gas and have

publicly-traded common stock. The Gas Distribution Group companies have the following common characteristics: (i) they are listed in The Value Line Investment Survey in the section “Natural Gas Distribution Industry,” (ii) their stock is publicly-traded, (iii) they have not reduced or omitted their dividend, (iv) they operate in the central region of the U.S., and (v) they are not currently involved in a publicly-announced merger or acquisition. The Gas Distribution Group includes Atmos Energy Corporation, Laclede Group, Inc., NICOR, Inc., and Peoples Energy Corporation.

23. Q. In the selection of your Gas Distribution Group you have applied a geographic screening criteria. Why have you not applied a geographic screening criteria in the composition of your Water Group?

A. Unlike the Gas Distribution, a broader definition of the Water Group is necessary with the objective of assembling a sufficient number of companies for proxy group purposes. There are a very limited number of companies from which the Water Group can be assembled. As such, a geographic screening criteria is not suitable for the water industry because the overall population of available companies is quite small. This is dissimilar to the gas industry whereby geographic screening criteria can be applied to a larger population of available gas companies.

24. Q. How do the bond ratings compare for, the Water Group, the Gas Distribution Group, and the S&P Public Utilities?

386 A. Presently, the corporate credit rating ("CCR") for the Water Group is A+
387 from S&P and A1 from Moody's. The Gas Distribution Group has similar
388 credit quality as shown by an A+ rating from S&P and A1 rating from
389 Moody's. The CCR is a designation by S&P that focuses upon the credit
390 quality of the issuer of the debt, rather than upon the debt obligation itself.
391 The incorporation of "ultimate recovery risk" associated with senior
392 secured debt led to the "notching" process that now permits separate
393 ratings on specific debt obligations of each company. For the S&P Public
394 Utilities, the average composite rating is BBB+ by S&P and Baa1 by
395 Moody's. Many of the financial indicators that I will subsequently discuss
396 are considered during the rating process.

397 25. Q. What factors influence the bond ratings assigned by the credit rating
398 agencies?

399 A. A public utility must have the financial strength to support its credit
400 standing in order to fulfill its public service responsibilities. The credit
401 rating agencies consider various qualitative and quantitative factors in
402 assigning grades of creditworthiness. On June 18, 1999, S&P modified its
403 benchmark criteria with a focus on the relative business risk of a firm
404 regardless of its industry-type. These benchmarks replaced former criteria
405 that were directed toward specific types of utilities. Now, each water
406 company will be measured against a uniform set of financial benchmarks
407 applicable to all firms that are assigned to a specific business profile. S&P
408 has indicated that no rating changes should be expected from the new

409 financial targets because they were developed by integrating prior
 410 financial benchmarks and historical industrial medians. The financial
 411 benchmarks for a utility with a “3” business profile include:

| | Pre-Tax | Debt | Funds from | Funds from |
|---------------|-----------------|-----------------|-----------------|-------------|
| | Interest | | Operations | Operations |
| | Coverage | Leverage | Interest | to Total |
| <u>Rating</u> | <u>Coverage</u> | <u>Leverage</u> | <u>Coverage</u> | <u>Debt</u> |
| 417 AA | 4.0-3.4x | 42.0-47.5% | 4.5-3.9x | 31.5-26.0% |
| 418 A | 3.4-2.8 | 47.5-53.0 | 3.9-3.1 | 26.0-20.0 |
| 419 BBB | 2.8-1.8 | 53.0-61.0 | 3.1-2.1 | 20.0-14.0 |
| 420 BB | 1.8-1.1 | 61.0-67.0 | 2.1-1.3 | 14.0-9.5 |
| 421 B | 1.1-0.3 | 67.0-74.0 | 1.3-0.5 | 9.5-4.0 |

422 26. Q. How do the financial data compare for IAWC, the Water Group, Gas
 423 Distribution Group and the S&P Public Utilities?

424 A. The broad categories of financial data that I will discuss are shown on
 425 Schedules 2, 3, 4, and 5 of IAWC Exhibit 8.0. The data cover the five-
 426 year period 1997-2001. I will highlight the important categories of
 427 relative risk as follows:

428 Size. In terms of capitalization, IAWC and the Water Group are
 429 smaller than the average size of the Gas Distribution Group and the S&P
 430 Public Utilities. All other things being equal, a smaller company is riskier
 431 than a larger company because a given change in revenue and expense has
 432 a proportionately greater impact on a smaller firm. As I will demonstrate
 433 later, the size of a firm can impact its cost of equity.

434 Market Ratios. Market-based financial ratios, such as
 435 earnings/price ratios and dividend yields, provide a partial measure of the
 436 investor-required cost of equity. If all other factors are equal, investors

437 will require a higher return on equity for companies that exhibit greater
438 risk, in order to compensate for that risk. That is to say, a firm that
439 investors perceive to have higher risks will experience a lower price per
440 share in relation to expected earnings; a high earnings/price ratio is thus
441 indicative of greater risk¹.

442 There are no market ratios available for IAWC. The average
443 earnings/price ratios were lower for the Water Group than for the Gas
444 Distribution Group. The average earnings/price ratio for the S&P Public
445 Utilities was higher than that of the Water Group and the Gas Distribution
446 Group. The five-year average dividend yields were highest for the Gas
447 Distribution Group, followed by the S&P Public Utilities and the Water
448 Group. The five-year average market-to-book ratio was highest for the
449 Water Group, followed by the S&P Public Utilities and the Gas
450 Distribution Group.

451 Common Equity Ratio. The level of financial risk is measured by
452 the proportion of long-term debt and other senior capital that is contained
453 in a company's capitalization. Financial risk is also analyzed by
454 comparing common equity ratios (the complement of the ratio of debt and
455 other senior capital). That is to say, a firm with a high common equity
456 ratio has lower financial risk, while a firm with a low common equity ratio
457 has higher financial risk. The five-year average common equity ratios,

¹ For example, two otherwise similarly situated firms each reporting \$1.00 earnings per share would have different market prices at varying levels of risk (i.e., the firm with a higher level of risk will have a lower share value, while the firm with a lower risk profile will have a higher share value).

based on permanent capital, were 48.5% for IAWC, 50.8% for the Water Group, 55.4% for the Gas Distribution Group, and 40.6% for the S&P Public Utilities.

Return on Book Equity. Greater variability (i.e., uncertainty) of a firm's earned returns signifies relative levels of risk, as shown by the coefficient of variation (standard deviation ÷ mean) of the rate of return on book common equity. The higher the coefficients of variation, the greater degree of variability. For the five-year period, the coefficients of variation were 0.128 (1.6% ÷ 12.5%) for IAWC, 0.072 (0.8% ÷ 11.1%) for the Water Group, 0.175 (2.1% ÷ 12.0%) for the Gas Distribution Group, and 0.162 (1.9% ÷ 11.7%) for the S&P Public Utilities. The relative earnings variability reveals higher risk for the Gas Distribution Group and the S&P Public Utilities, followed by IAWC, and finally the Water Group.

Operating Ratios. I have also compared operating ratios (the percentage of revenues consumed by operating expense, depreciation and taxes other than income).² The five-year average operating ratios were 67.4% for IAWC, 71.0% for the Water Group, 89.3% for the Gas Distribution Group and 83.5% for the S&P Public Utilities.

Coverage. The level of fixed charge coverage (i.e., the multiple by which available earnings cover fixed charges, such as interest expense) provides an indication of the earnings protection for creditors. Higher

² The complement of the operating ratio is the operating margin which provides a measure of profitability. The higher the operating ratio, the lower the operating margin.

479 levels of coverage, and hence earnings protection for fixed charges, are
480 usually associated with superior grades of creditworthiness. The five-year
481 average interest coverage (excluding AFUDC) was 3.32 times for IAWC,
482 3.47 times for the Water Group, 3.51 times for the Gas Distribution Group
483 and 2.93 times for the S&P Public Utilities. This comparison shows that
484 IAWC had somewhat weaker creditor support than the Water Group and
485 the Gas Distribution Group where coverages were higher.

486 Quality of Earnings. Measures of earnings quality usually are
487 revealed by the percentage of Allowance for Funds Used During
488 Construction (“AFUDC”) related to income available for common equity,
489 the effective income tax rate, and other cost deferrals. These measures of
490 earnings quality usually influence a firm’s internally generated funds
491 because poor quality of earnings would not generate high levels of cash
492 flow. Typically, quality of earnings has not been a significant concern for
493 IAWC, the Water Group, the Gas Distribution Group, and the S&P Public
494 Utilities.

495 Internally Generated Funds. Internally generated funds (“IGF”)
496 provide an important source of new investment capital for a utility and
497 represent a key measure of financial strength. Historically, the five-year
498 average percentage of internally generated funds (“IGF”) to capital
499 expenditures was 47.0% for IAWC, 53.2% for the Water Group, 89.4%
500 for the Gas Distribution Group, and 106.7% for the S&P Public Utilities.

501 The IGF percentage for IAWC and the Water Group were inferior to the
502 Gas Distribution Group and the S&P Public Utilities.

503 Betas. The financial data that I have been discussing relate
504 primarily to company-specific risks. Market risk for firms with publicly-
505 traded stock is measured by beta coefficients, which attempt to identify
506 systematic risk, i.e., the risk associated with changes in the overall market
507 for common equities. A comparison of market risk is shown by the Value
508 Line betas provided on page 2 of Schedule 3 of IAWC Exhibit 8.0 -- .55
509 as the average for the Water Group, page 2 of Schedule 4 of IAWC
510 Exhibit 8.0 -- .59 as the average for the Gas Distribution Group, and page
511 3 of Schedule 5 of IAWC Exhibit 8.0 -- .64 as the average for the S&P
512 Public Utilities. Keeping in mind that the utility industry has changed
513 dramatically during the past five years, the systematic risk percentage is
514 86% $(.55 \div .64)$ for the Water Group and 92% $(.59 \div .64)$ for the Gas
515 Distribution Group as compared with the S&P Public Utilities' average
516 beta.

517 27. Q. Please summarize your risk evaluation of IAWC, the Water Group, and
518 the Gas Distribution Group.

519 A. The risk of IAWC parallels that of the Water Group in certain respects.
520 For example, the Company's size and operating ratios show fairly similar
521 risk traits for IAWC as for the Water Group. However, in several
522 important aspects, principally related to its more variable earned returns,
523 its weaker interest coverage, lower IGF to construction, and higher capital

intensity shows that the Company's risk is higher than that of the Water Group. As such, the cost of equity for the Water Group would only partially compensate for the Company's higher risk. Therefore, the Water Group provides a conservative basis for measuring the Company's cost of equity.

For the Gas Distribution Group, the risk measures show lower financial risk than for IAWC (i.e., higher common equity ratio for the Gas Distribution Group), yet their betas show higher systematic risk than the Water Group. The earnings variability is higher for the Gas Distribution Group than for IAWC and the Water Group. The Gas Distribution Group also has stronger IGF to capital expenditures and represents larger companies.

For the future, the risk of the water industry will be strongly influenced by the regulatory requirements associated with the SDWA, the need to maintain adequate supply, the need to provide increased security of the water supply, high capital intensity, a low rate of capital recovery, and relatively low percentages of IGF to construction. In the areas of capital intensity and financial risk, IAWC exhibits higher risk as compared to the Gas Distribution Group. In some respects, the risk of the Gas Distribution Group reveals characteristics similar to the water business, as shown by similar business profiles.

IV. COST OF EQUITY – GENERAL APPROACH

545
546 28. Q. Please describe the process you employed to determine the cost of equity
547 for IAWC.

548 A. Although my fundamental financial analysis provides the required
549 framework to establish the risk relationships among IAWC, the Water
550 Group, the Gas Distribution Group, and the S&P Public Utilities, the cost
551 of equity must be measured by standard financial models that I describe in
552 IAWC Exhibit 7.4. Differences in risk traits, such as size, business
553 diversification, geographical diversity, regulatory policy, financial
554 leverage, and bond ratings must be considered when analyzing the cost of
555 equity. It is also important to reiterate that no one method or model of the
556 cost of equity can be applied in an isolated manner. Rather, informed
557 judgment must be used to take into consideration the relative risk traits of
558 the firm. It is for this reason that I have used more than one method to
559 measure the Company's cost of equity. As noted in IAWC Exhibit 7.4
560 and elsewhere in my direct testimony, each of the methods used to
561 measure the cost of equity contains certain incomplete and/or overly
562 restrictive assumptions and constraints that are not optimal. Therefore, I
563 favor considering the results from all methods that I used. In this regard, I
564 have applied each of the methods with data taken from the Water Group
565 and the Gas Distribution Group and have arrived at a cost of equity of
566 11.0% for IAWC prior to the adjustment for flotation costs.

567

V. DISCOUNTED CASH FLOW ANALYSIS

567
568 29. Q. Please describe your use of the Discounted Cash Flow approach to
569 determine the cost of equity.

570 A. The details of my use of the DCF approach and the calculations and
571 evidence in support of my conclusions are set forth in IAWC Exhibit 7.5.
572 I will summarize them here. The Discounted Cash Flow (“DCF”) model
573 seeks to explain the value of an asset as the present value of future
574 expected cash flows discounted at the appropriate risk-adjusted rate of
575 return. In its simplest form, the DCF return on common stocks consists of
576 a current cash (dividend) yield and future price appreciation (growth) of
577 the investment. The cost of equity based on a combination of these two
578 components represents the total return that investors can expect with
579 regard to an equity investment.

580 Among other limitations of the model, there is a certain element of
581 circularity in the DCF method when applied in rate cases. This is because
582 investors’ expectations for the future depend upon regulatory decisions.
583 In turn, when regulators depend upon the DCF model to set the cost of
584 equity, they rely upon investor expectations which include an assessment
585 of how regulators will decide rate cases. Due to the circularity, the DCF
586 model may not fully reflect the true risk of a regulated firm.

587 As I describe in IAWC Exhibit 7.5, the DCF approach has other
588 limitations that diminish its usefulness in the ratesetting process when
589 stock prices diverge significantly from book values. When stock prices

590 diverge from book values by a significant margin, the DCF method will
591 lead to a misspecified cost of equity. If regulators rely upon the results of
592 the DCF (which are based on the market price of the stock of the
593 companies analyzed) and apply those results to a net original cost (book
594 value) rate base, the resulting earnings will not produce the level of
595 required return specified by the model when market prices vary from book
596 value. This is to say, such distortions tend to produce DCF results that
597 understate the cost of equity to the regulated firm when using a book value
598 rate base. As I will explain later in my testimony, in at least one respect,
599 the DCF model should be modified to account for differences in financial
600 leverage when market prices and book values diverge.

601 30. Q. Are there any other factors that make the results of the DCF model
602 problematic in measuring the cost of equity for water utilities?

603 A. The results of the DCF model are especially troublesome at this time due
604 to the merger and acquisition (“M&A”) activity presently sweeping the
605 water utility industry. Water companies have become acquisition targets
606 of foreign utilities, domestic energy companies, and other water utilities
607 that are in the process of “rolling-up” the industry. It has been reported
608 that there are approximately 55,000 separate investor-owned and
609 municipal water utility systems in the U.S. There are numerous examples
610 of water utility acquisitions within recent memory. American Water
611 Works completed the \$700 million acquisition of National Enterprises,
612 Inc. and has acquired the water and wastewater utility assets of Citizens

613 Communications. Philadelphia Suburban Corporation completed the
614 major acquisition of Consumers Water Company and proposes to acquire
615 Pennichuck Corporation. Domestic energy companies have also become
616 interested in the water utility business, as exemplified by Allete's
617 extensive water utility holdings in Florida and North Carolina and DQE's
618 water utility acquisitions through its AquaSource operations. Both Allete
619 and DQE are assessing their commitment to the water business, and Allete
620 is actively pursuing the sale of its Florida water properties. DQE agreed to
621 sell its AquaSource assets to Philadelphia Suburban Corporation.
622 Indianapolis Water Company was sold by NiSource pursuant to its
623 acquisition of Columbia Energy Group. Yorkshire Water purchased
624 Aquarion; Suez Lyonnaise des Eaux purchased all of the remaining shares
625 of United Water Resources that it did not already own; and Thames Water
626 purchased E'Town Corporation. As I indicated previously, AWW will be
627 acquired by the German utility RWE.

628 These acquisitions were accomplished at premiums offered to
629 induce stockholders to sell their shares – the Aquarion acquisition was at a
630 19.3% premium, the UWR acquisition was at a 54% premium, and the
631 E'Town Corp. acquisition was at a 36% premium. The pending
632 acquisition of American Water Works by RWE includes a 36.5% premium
633 over AWW's average stock price over the 30 days prior to the offer.
634 These premiums create a ripple effect on the stock prices of all water
635 utilities, just like a rising tide lifts all boats. Due to M&A activity, there

636 has been a significant run-up of the stock prices for the water companies.
637 With these elevated stock prices, dividend yields fall, and without some
638 adjustment to the growth component of the DCF model, the results
639 become unduly depressed by reference to alternative investment
640 opportunities – such as public utility bonds. There are three remedies
641 available to deal with these potentially anomalous DCF results: (i) an
642 adjustment to the DCF model to reflect the divergence of stock price and
643 book value, (ii) the use of a growth component in the DCF model which is
644 at the high end of the range, and (iii) supplementing the DCF results with
645 other measures of the cost of equity.

646 31. Q. Please explain the dividend yield component of a DCF analysis.

647 A. The DCF methodology requires the use of an expected dividend yield to
648 establish the investor-required cost of equity. For the twelve months
649 ended June 2002, the monthly dividend yields of the Water Group and the
650 Gas Distribution Group are shown graphically on Schedule 6 of IAWC
651 Exhibit 8.0. The monthly dividend yields shown on Schedule 6 of IAWC
652 Exhibit 8.0 reflect an adjustment to the month-end prices to reflect the
653 build up of the dividend in the price that has occurred since the last ex-
654 dividend date (i.e., the date by which a shareholder must own the shares to
655 be entitled to the dividend payment -- usually about two to three weeks
656 prior to the actual payment). An explanation of this adjustment is
657 provided in IAWC Exhibit 7.5.

For the twelve months ending June 2002, the average dividend yield was 3.37% for the Water Group and 5.23% for the Gas Distribution Group based upon a calculation using annualized dividend payments and adjusted month-end stock prices. The dividend yields for the more recent six- and three- month periods were 3.37% and 3.34% for the Water Group, respectively, and 5.14% and 5.02% for the Gas Distribution Group, respectively. I have used, for the purpose of my direct testimony, a dividend yield of 3.37% for the Water Group and 5.14% for the Gas Distribution Group which represents the six-month average yield. The use of a six-month dividend yield will reflect current capital costs while avoiding spot yields.

For the purpose of a DCF calculation, the average dividend yields must be adjusted to reflect the prospective nature of the dividend payments i.e., the higher expected dividends for the future. Recall that the DCF is an expectational model that must reflect investor anticipated cash flows. I have adjusted the six-month average dividend yields in three different but generally accepted manners, and used the average of the three as calculated in IAWC Exhibit 7.5. Those adjusted dividend yields are 3.47% for the Water Group and 5.31% for the Gas Distribution Group.

32. Q. What investor-expected growth rate is appropriate in a DCF calculation?

A. Historical performance and analysts' forecasts support my opinion of the growth expected by investors. Although some DCF devotees would advocate that mathematical precision should be followed when selecting a

681 growth rate (i.e., precise input variables often considered within the
682 confines of retention growth), the fact is that investors, when establishing
683 the market prices for a firm, do not behave in the same manner assumed
684 by the constant growth rate model using accounting values. Rather,
685 investors consider both company-specific variables and overall market
686 sentiment (i.e., level of inflation rates, interest rates, economic conditions,
687 etc.) when balancing their capital gains expectations with their dividend
688 yield requirements. I follow an approach that is not rigidly formatted
689 because investors are not influenced solely by a single set of company-
690 specific variables weighted in a formulaic manner. Therefore, in my
691 opinion, all relevant growth rate indicators using a variety of techniques
692 must be evaluated.

693 33. Q. What data have you considered in your growth rate analysis?

694 A. For the reasons discussed below, primary emphasis has been given to
695 forecasted growth rates. The bar graph provided on pages 1 and 2 of
696 Schedule 7 of IAWC Exhibit 8.0 shows the historical growth rates in
697 earnings per share, dividends per share, book value per share, and cash
698 flow per share for the Water Group and Gas Distribution Group,
699 respectively. The historical growth rates were taken from the Value Line
700 publication which provides historical data. As shown on pages 1 and 2 of
701 Schedule 7 of IAWC Exhibit 8.0, the historical earnings per share growth
702 was in the range of 3.60% to 3.33% for the Water Group, and 1.88% to
703 2.00% for the Gas Distribution Group. The historical growth rates in

704 earnings per share contain some instances of negative values for some
705 individual companies. Obviously, negative growth rates provide no
706 reliable guide to gauge investor expected growth for the future. Investor
707 expectations always encompass long-term positive growth rates and, as
708 such, could not be represented by sustainable negative rates of change.
709 Therefore, statistics that include negative growth rates should not be given
710 any weight when formulating a composite investors' growth expectation
711 for the future. The prospect of rate increases granted by regulators, the
712 continued obligation to provide service as required by customers, and the
713 ongoing growth of customers mandate investor expectations of positive
714 future growth rates. Stated simply there is no reason for investors to
715 expect that a utility will wind up its business and distribute its common
716 equity capital to shareholders, which would be symptomatic of a long-
717 term permanent earnings decline. Although investors have knowledge that
718 negative growth and losses can occur, their expectations always include
719 positive growth. Because, in the long run, investors will always expect
720 positive growth, negative historic values will not provide a reasonable
721 representation of future growth expectations. Rational investors always
722 expect positive returns, otherwise they will hold cash rather than invest
723 with the expectation of a loss.

724 Pages 1 and 2 of Schedule 8 of IAWC Exhibit 8.0 provide
725 projected earnings per share growth rates taken from analysts' forecasts
726 compiled by IBES, Zacks, First Call, and Market Guide and from the

727 Value Line publication. The IBES, Zacks, First Call, and Market Guide
728 forecasts are limited to earnings per share growth, while Value Line makes
729 projections of other financial variables. The Value Line forecasts of
730 dividends per share, book value per share, and cash flow per share have
731 also been included on pages 1 and 2 of Schedule 8 of IAWC Exhibit 8.0
732 for the Water Group and the Gas Distribution Group.

733 As to the five-year forecast growth rates, page 1 of Schedule 8 of
734 IAWC Exhibit 8.0 indicates that the projected earnings per share growth
735 rates for the Water Group are 5.20% by IBES, 5.50% by Zacks, 5.40% by
736 First Call, 4.82% by Market Guide, and 7.25% by Value Line. For the
737 Gas Distribution Group, the projected earnings per share growth rates are
738 5.50%, 6.10%, 5.00%, 5.66% and 7.75% by these services, respectively.
739 Dividends per share growth rates are forecast by Value Line to be lower.
740 The Value Line projections indicate that earnings per share will grow
741 prospectively at a more rapid rate (i.e., 7.25% in the case of the Water
742 Group and 7.75% in the case of the Gas Distribution Group) than the
743 respective dividends per share growth rates (i.e., 2.83% and 2.75% for
744 these groups), which indicate a declining dividend payout ratio for the
745 future. As indicated earlier, and in IAWC Exhibit 7.5, with the constant
746 price-earnings multiple assumption of the DCF model, growth for these
747 companies will occur at the higher earnings per share growth rate, thus
748 producing the capital gains yield expected by investors.

749 34. Q. Does an investment horizon, such as five years, invalidate the use of the
750 DCF model?

751 A. No. In fact, it illustrates that the infinite form of the model contains an
752 unrealistic assumption. Rather than viewing the DCF in the context of an
753 endless stream of growing dividends (e.g., a century of cash flows), the
754 growth in the share value (i.e., capital appreciation, or capital gains yield)
755 is most relevant to investors' total return expectations. Hence, the sale
756 price of a stock can be viewed as a liquidating dividend which can be
757 discounted along with the annual dividend receipts during the investment-
758 holding period to arrive at the investor expected return. The growth in the
759 price per share will equal the growth in earnings per share absent any
760 change in price-earnings (P-E) multiple -- a necessary assumption of the
761 DCF. As such, my DCF analysis, which relies principally upon five-year
762 forecasts of earnings per share growth, conforms to the type of analysis
763 that influences the total return expectation of investors.

764 35. Q. Are there unusual factors that have an impact on investors' growth
765 expectations for the water utility companies?

766 A. Yes. The M&A activity described earlier has a significant impact on
767 investor expected growth, as reflected in the prices of the water utility
768 stocks. As a consequence, there has been the run-up in stock prices
769 related to M&A expectations, either announced or anticipated. This price
770 action has fundamentally changed the investment horizon associated with
771 investors' growth expectations for the water utilities. Investment horizons

772 have shortened considerably in the context of prices offered in the
773 proposed M&A transactions. When a company is the target of an
774 acquisition, a more defined number of cash flows are reflected in the stock
775 price with particular emphasis being placed on the acquisition price (i.e.,
776 the liquidating dividend) of the stock. That is to say, today's stock price is
777 the product primarily of the buy-out price of the stock. As such, the long-
778 term horizon of future dividend payments ceases to be the focus of
779 investors. Rather, the acquisition price becomes the paramount
780 consideration in the current stock price because the future value of the
781 stock is established by reference to the purchase price along with dividend
782 payments that occur up to the time the company is acquired and its stock
783 no longer trades.

784 In addition, it is important to recognize that once an offer has been
785 made and accepted by the target company, its stock begins to trade on the
786 basis of the premium being offered by the acquiring company. That
787 premium is offered in order to obtain control of the target company and to
788 induce existing stockholders to participate in the sale of its shares. At that
789 point, the stock price disconnects from the earnings forecasts made by
790 securities' analysts when the target company operated independently.
791 After the combination occurs in the merger/acquisition, the surviving
792 company will be able to attain increased shareholder value through
793 economics of scope and scale that increase productivity and profitability to
794 the point where earnings growth will exceed that which was attainable by

795 the pre-merger company. Synergies, such as those mentioned above, are
796 the reasons that acquiring companies can offer premiums over pre-
797 announcement stock prices and still anticipate that the acquisition will be
798 accretive to earnings and add shareholder value. Otherwise, acquisitions
799 at premiums would not be economically feasible. While the
800 circumstances described above apply directly to target companies that
801 have agreed to be acquired, similar expectations are reflected in the stock
802 prices of other water utilities that represent potential candidates for
803 acquisition. That is to say, the stock prices of many water utilities include
804 some expectation that they may become the target of a takeover during the
805 consolidation of the water utility industry.

806 36. Q. What conclusion have you drawn from these data?

807 A. Although ideally historical and projected earnings per share and dividends
808 per share growth indicators would be used to provide an assessment of
809 investor growth expectations for a firm, the circumstances of the Water
810 Group and the Gas Distribution Group mandate that the greatest emphasis
811 be placed upon projected earnings per share growth. The massive
812 restructuring of the utility industries suggests that historical evidence does
813 not represent a complete measure of growth for these companies. Rather,
814 projections of future earnings growth provide the principal focus of
815 investor expectations. In this regard, it is worthwhile to note that
816 Professor Myron Gordon, the foremost proponent of the DCF model in
817 rate cases, established that the best measure of growth in the DCF model is

818 forecasts of earnings per share growth.³ Hence, to follow Professor
819 Gordon's findings, projections of earnings per share growth, such as those
820 published by IBES, Zacks, First Call, Market Guide, and Value Line,
821 represent a reasonable assessment of investor expectations.

822 While I have employed IBES as one measure of investor expected
823 growth, there is no reason to limit the analysts' forecasts to the IBES
824 source alone. It is appropriate to consider all forecasts of earnings growth
825 rates that are available to investors. In this regard, I have considered the
826 forecasts from Zacks, First Call, Market Guide and Value Line. The
827 Zacks, First Call, and Market Guide growth rates are consensus forecasts
828 taken from a survey of analysts that make projections of growth for these
829 companies. The Zacks, First Call, and Market Guide estimates are
830 obtained from the Internet and are widely available to investors free-of-
831 charge. First Call is quoted frequently in The Wall Street Journal and
832 Barron's The Dow Jones Business and Financial Weekly when reporting
833 on earnings forecasts. The Value Line forecasts are also widely available
834 to investors and can be obtained by subscription or free-of-charge at most
835 public and collegiate libraries. For the Water Group, the forecasts of
836 earnings per share data as shown on page 1 of Schedule 8 of IAWC
837 Exhibit 8.0 support my opinion that a prospective growth rate of 5.75%
838 represents a reasonable expectation. For the Gas Distribution Group, a

³ "Choice Among Methods of Estimating Share Yield," The Journal of Portfolio Management, spring 1989 by Gordon, Gordon & Gould.

839 6.00% growth rate is indicated. While the DCF growth rates cannot be
840 established solely with a mathematical formulation, they are within the
841 array of earnings per share growth rates shown by the analysts' forecasts.
842 As previously indicated, the restructuring and consolidation now taking
843 place in the utility industry will provide additional opportunities (both
844 regulated and non-regulated) as the utility industry successfully adapts to
845 the new business environment. Changes in fundamentals that will
846 enhance the growth prospects for the future will undoubtedly develop
847 beyond the next five years typically considered in the analysts' forecasts.
848 Moreover, expectations concerning merger and acquisition ("M&A")
849 activities also impact stock prices. M&A premiums have the effect of
850 raising prices, and therefore reducing observed dividend yields, without
851 necessarily showing up in higher long-term growth rate forecasts. In that
852 case, the traditional DCF calculation would understate the required cost of
853 equity.

854 37. Q. Are there additional factors that must be considered in developing the rate
855 of return on common equity when using the DCF model?

856 A. Yes. As noted previously, and as demonstrated in IAWC Exhibit 7.5, the
857 divergence of stock prices from book values creates a conflict within the
858 DCF model when the results of a market-derived cost of equity are applied
859 to the common equity account measured at book value in the ratesetting
860 context. This is the situation today where the market price of stock
861 exceeds its book value for most companies. This divergence of price and

book value also creates a financial risk difference, whereby the capitalization of a utility measured at its market value contains relatively less debt and more equity than the capitalization measured at its book value. It is a well-accepted fact of financial theory that a relatively higher proportion of equity in the capitalization has less financial risk than another capital structure more heavily weighted with debt. This is the situation for the Water Group and the Gas Distribution Group where the market value of their capitalization contains far more equity than is shown by the book capitalization. The following comparison demonstrates this situation where the market capitalization is developed by taking the “Fair Value of Financial Instruments” (Disclosures about Fair Value of Financial Instruments -- Statements of Financial Accounting Standards (“FAS”) No. 107) as shown in the annual reports for these companies and the market value of the common equity using the price of stock. The comparison of capital structure ratios is:

| | <u>Capitalization at Market Value</u> | | <u>Capitalization at Carrying Amounts</u> | |
|-----------------|---------------------------------------|----------------|---|----------------|
| | | Gas | | Gas |
| | | Distribution | Water | Distribution |
| | <u>Water Group</u> | <u>Group</u> | <u>RTO Group</u> | <u>Group</u> |
| Debt | 31.56% | 33.93% | 50.36% | 46.70% |
| Preferred Stock | 0.46 | 0.11 | 0.74 | 0.20 |
| Common Equity | <u>67.98</u> | <u>65.96</u> | <u>48.90</u> | <u>53.10</u> |
| Total | <u>100.00%</u> | <u>100.00%</u> | <u>100.00%</u> | <u>100.00%</u> |

With regard to the capital structure ratios represented by the book value shown above, there are some variances with the ratios shown on Schedules 3 and 4 of IAWC Exhibit 8.0. These variances arise from the use of balance sheet values in computing the capital structure ratios shown

890 on Schedules 3 and 4 of IAWC Exhibit 8.0 and the use of the Carrying
891 Amounts of the Financial Instruments reported according to FAS 107 (the
892 Carrying Amounts prescribed by FAS 107 were used in the table shown
893 above to be comparable to the market value amounts used in the
894 calculations).

895 38. Q. What are the implications of the capital structure ratios measured with the
896 market value of the securities as compared to the book value of the
897 capitalization?

898 A. The capital structure ratios measured at their book values show more
899 financial leverage, and hence higher risk, than the capitalization measured
900 at their market values. This means that a market derived cost of equity,
901 using models such as DCF and CAPM, reflects a level of financial risk
902 that is different from that shown by the book capitalization. Hence, it is
903 necessary to adjust the market-determined cost of equity upward to reflect
904 the higher financial risk related to the book value capitalization used for
905 ratesetting purposes. Failure to make this modification would result in a
906 mismatch of the lower financial risk related to market value used to
907 measure the cost of equity and the higher financial risk of the book value
908 capital structure used in the ratesetting process. That is to say, the cost of
909 equity for the Water Group that is related to the 48.90% common equity
910 ratio using book value has higher financial risk than the 67.98% common
911 equity ratio using market values. Likewise, there is higher financial risk
912 associated with the 53.10% common equity ratio using book value than

913 the 65.96% common equity ratio measured at its market value for the Gas
914 Distribution Group. Because the ratesetting process utilizes the book
915 value capitalization, an adjustment should be made to the market-
916 determined cost of equity upward for the higher financial risk related to
917 the book value of the capitalization.

918 39. Q. How is the DCF-determined cost of equity adjusted for the financial risk
919 associated with the book value of the capitalization?

920 A. In pioneering work, Nobel laureates Modigliani and Miller developed
921 several theories about the role of leverage in a firm's capital structure.⁴ As
922 part of that work, Modigliani and Miller established that as the borrowing
923 of a firm increases, the expected return on stockholders' equity also
924 increases. This principle is incorporated into my leverage adjustment
925 which recognizes that the expected return on equity increases to reflect the
926 increased risk associated with the higher financial leverage shown by the
927 book value capital structure, as compared to the market value capital
928 structure that contains lower financial risk. Modigliani and Miller
929 proposed several approaches to quantify the equity return associated with
930 various degrees of debt leverage in a firm's capital structure. These
931 formulas point toward an increase in the equity return associated with the
932 higher financial risk of the book value capital structure.

⁴ Modigliani, F. and Miller, M.H. "The Cost of Capital, Corporation Finance, and the Theory of Investments." *American Economic Review*, June 1958, 261-297.

Modigliani, F. and Miller, M. H. "Taxes and the Cost of Capital: A Correction." *American Economic Review*, June 1963, 433-443.

933 40. Q. How can the Modigliani and Miller theory be applied to calculate the rate
 934 of return on book common equity using the market-derived cost of equity
 935 as a starting point?

936 A. It is necessary to first calculate the cost of equity for a firm without any
 937 leverage. The cost of equity for an unleveraged firm using the capital
 938 structure ratios calculated with the market values is:

$$939 \quad k_u = k_e - (((k_u - i) \cdot (1-t) \cdot D/E) - (k_u - d) \cdot P/E)$$

940 Water Group

$$941 \quad 8.83\% = 9.22\% - (((8.83\% - 7.58\%) \cdot .65) \cdot 31.56\%/67.98\%) - (8.83\% - 7.31\%) \cdot 0.46\%/67.98\%$$

942 Gas Distribution Group

$$943 \quad 10.37\% = 11.31\% - (((10.37\% - 7.58\%) \cdot .65) \cdot 33.93\%/65.96\%) - (10.37\% - 7.31\%) \cdot 0.11\%/65.96\%$$

944 where k_u = cost of equity for an all-equity firm, k_e = market determined
 945 cost of equity, i = cost of debt⁵, d = dividend rate on preferred stock⁶, D =
 946 debt ratio, P = preferred stock ratio, and E = common equity ratio. The
 947 formula shown above indicates that the cost of equity for a firm with
 948 100% equity is 8.85% using the market value of the Water Group
 949 capitalization and 10.39% using the Gas Distribution Group's data.

950 Having determined the cost of equity for a firm with 100% equity,
 951 I then calculated the rate of return on common equity using the book value
 952 capital structure. This provides:

953

⁵ The cost of debt is the six-month average yield on Moody's A rated public utility bonds.

⁶ The cost of preferred is the six-month average yield on Moody's "A" rated preferred stock.

$$ke = ku + (((ku - i) (1-t) D/E) + (ku - d) P/E$$

954 Water Group

$$955 \quad 9.68\% = 8.83\% + (((8.83\% - 7.58\%) .65) 50.36\%/48.90\%) + (8.83\% - 7.31\%) 0.74\%/48.90\%$$

956 Gas Distribution Group

$$957 \quad 11.97\% = 10.37\% + (((10.37\% - 7.58\%) .65) 46.70\%/53.10\%) + (10.37\% - 7.31\%) 0.20\%/53.10\%$$

958 Hence the Modigliani and Miller theory shows that the cost of
 959 equity for the Water Group increases by 0.46% (9.68% - 9.22%) when the
 960 common equity ratio declines from 67.98% using the market value of
 961 equity to 48.90% using the book value of equity. For the Gas Distribution
 962 Group, the change is 0.66% (11.97% - 11.31%). The Pennsylvania Public
 963 Utility Commission has recognized this adjustment in the magnitude of 60
 964 basis points in its rate case decision dated January 10, 2002 for
 965 Pennsylvania-American Water Company at Docket No. R-00016339.
 966 Therefore, my leverage adjustment to account for the difference between
 967 the market value and book value capital structure is 0.46% in the case of
 968 the Water Group and 0.66% in the case of the Gas Distribution Group.

969 41. Q. Please provide the DCF return based upon your preceding discussion of
 970 dividend yield, growth, and leverage.

971 A. As previously explained, I utilized a six-month average dividend yield
 972 (“ D_1/P_0 ”) adjusted in a forward-looking manner for my DCF calculation.
 973 This dividend yield is used in conjunction with the growth rate (“ g ”)
 974 previously developed. The DCF also includes the leverage modification
 975 (“ $lev.$ ”) to recognize that the book value equity ratio is used in the

976 ratesetting process rather than the market value equity ratio related to the
977 price of stock. The resulting DCF cost rates are:

$$978 \qquad \qquad \qquad D_1/P_0 + g + lev. = k$$

$$979 \text{ Water Group} \qquad 3.47\% + 5.75\% + 0.46\% = 9.68\%$$

$$980 \text{ Gas Distribution Group} \qquad 5.31\% + 6.00\% + 0.66\% = 11.97\%$$

981 The DCF results shown above provide the rate of return on common
982 equity when stated in terms of the book value capital structure. I should
983 reiterate that the simplified (i.e., Gordon) form of the DCF model contains
984 a constant growth assumption. In addition, the DCF cost rate provides an
985 explanation of the rate of return on common stock market prices without
986 regard to the prospect of a change in the price-earnings multiple. An
987 assumption that there will be no change in the price-earnings multiple is
988 not supported by the realities of the equity market because price-earnings
989 multiples do not remain constant.

990 **VI. RISK PREMIUM ANALYSIS**

991 42. Q. Please describe your use of the Risk Premium approach to determine the
992 cost of equity.

993 A. The details of my use of the Risk Premium approach and the evidence in
994 support of my conclusions are set forth in IAWC Exhibit 7.7. I will
995 summarize them here. With this method, the cost of equity capital is
996 determined by corporate bond yields plus a premium to account for the
997 fact that common equity is exposed to greater investment risk than debt
998 capital.

999 43. Q. What long-term public utility debt cost rate did you use in your risk
1000 premium analysis?

1001 A. In my opinion, a 7.25% yield represents a reasonable estimate of a
1002 prospective long-term debt cost rate for an A-rated public utility bonds.
1003 As I will subsequently show, the Moody's index and the Blue Chip
1004 forecasts support this figure.

1005 The historical yields for long-term public utility debt are shown
1006 graphically on page 1 of Schedule 9 of IAWC Exhibit 8.0. For the twelve
1007 months ended June 2002, the average monthly yield on Moody's A rated
1008 index of public utility bonds was 7.64%. For the six and three-month
1009 periods ending June 2002, the yields were 7.58% and 7.50%, respectively.

1010 I have determined the forecast yields on A rated public utility debt
1011 by using the Blue Chip Financial Forecasts ("Blue Chip") along with the
1012 spread in the yields that I describe in IAWC Exhibit 7.6. The Blue Chip
1013 Financial Forecasts is published monthly and contains consensus forecasts
1014 of a variety of interest rates compiled from a panel of 45 banking,
1015 brokerage, and investment advisory services. In early 1999, Blue Chip
1016 stopped publishing forecasts of yields on A rated public utility bonds
1017 because the Fed deleted these yields from its Statistical Release H.15. To
1018 independently project a forecast of the yields on A rated public utility
1019 bonds, I have combined the forecast yields on thirty-year Treasury bonds
1020 published on July 1, 2002 and the yield spread of 1.75% that I describe in
1021 IAWC Exhibit 7.6. These spreads can be traced to a general aversion to

risk, as well as the perceived scarcity of long-term treasury obligations due to a shrinking supply of the issues. For comparative purposes, I have also shown the Blue Chip Financial Forecasts of Aaa rated and Baa rated corporate bonds. These forecasts are:

| Quarter | Blue Chip Financial forecasts | | | | |
|---------------|-------------------------------|-----------|----------------------|-----------------|-------|
| | Corporate bonds | | Long-Term Average | A-rated Utility | |
| | Aaa rated | Baa rated | | Spread | Yield |
| 2nd Qtr. 2002 | 6.7% | 7.9% | 5.6% | 1.75% | 7.35% |
| 3rd Qtr. 2002 | 6.8 | 8.0 | 5.8 | 1.75 | 7.55 |
| 4th Qtr. 2002 | 7.0 | 8.1 | 5.9 | 1.75 | 7.65 |
| 1st Qtr. 2003 | 7.1 | 8.2 | 6.0 | 1.75 | 7.75 |
| 2nd Qtr. 2003 | 7.2 | 8.2 | 6.1 | 1.75 | 7.85 |
| 3rd Qtr. 2003 | 7.3 | 8.3 | 6.2 | 1.75 | 7.95 |

Given these forecasts and the historical long-term interest rates, a 7.25% yield on A rated public utility bonds represents a reasonable expectation given the recent decline in the yield on Treasury and corporate bonds.

44. Q. What equity risk premium have you determined for public utilities?

A. IAWC Exhibit 7.7 provides a discussion of the financial returns that I relied upon to develop the appropriate equity risk premium for the S&P Public Utilities. It should be recognized that the S&P Public Utility index is a subset of the overall S&P 500 Composite index. The S&P Public Utility index is intended to represent firms engaged in regulated activities and today is comprised of electric companies and gas companies. With the equity risk premiums developed for the S&P Public Utilities as a base, I derived the equity risk premium for the Water Group and the Gas Distribution Group. The S&P Public Utility index contains companies that are more closely aligned with these groups than some broader market

1049 indexes, such as the S&P 500 Composite index. Use of the S&P Public
1050 Utility index reduces the role of subjective judgment in establishing the
1051 risk premium for public utilities.

1052 45. Q. What equity risk premium for the S&P Public Utilities have you
1053 determined for this case?

1054 A. To develop an appropriate risk premium, I analyzed the results for the
1055 S&P Public Utilities by averaging (i) the midpoint of the range shown by
1056 the geometric mean and median and (ii) the arithmetic mean. This
1057 procedure has been employed to provide a comprehensive way of
1058 measuring the central tendency of the historical returns. As shown by the
1059 values indicated on page 2 of Schedule 10 of IAWC Exhibit 8.0, the
1060 indicated risk premiums for the various time periods analyzed are 5.16%
1061 (1928-2001), 5.96% (1952-2001), 5.24% (1974-2001), and 5.39% (1979-
1062 2001). The selection of the shorter periods taken from the entire historical
1063 series is designed to provide a risk premium that conforms more nearly to
1064 present investment fundamentals and removes some of the more distant
1065 data from the analysis.

1066 46. Q. Do you have further support for the selection of the time periods used in
1067 your equity risk premium determination?

1068 A. Yes. First, the terminal year of my analysis presented in Schedule 10 of
1069 IAWC Exhibit 8.0 represents the most recent calendar year of data which
1070 is available at the time this testimony was prepared. Hence, all historical
1071 periods include data through 2001. Second, the selection of the initial year

1072 of each period was based upon the events that I described in IAWC
1073 Exhibit 7.7. These events were fixed in history and cannot be manipulated
1074 as later financial data becomes available. That is to say, using the
1075 Treasury-Federal Reserve Accord as a defining event, the year 1952 is
1076 fixed as the beginning point for the measurement period regardless of the
1077 financial results that subsequently occurred. As such, additional data is
1078 merely added to the earlier results when it becomes available, clearly
1079 showing that the periods chosen were not driven by the desired results of
1080 the study.

1081 47. Q. What conclusions have you drawn from these data?

1082 A. Using the summary values provided on page 2 of Schedule 10 of IAWC
1083 Exhibit 8.0, the 1928-2001 period provides the lowest indicated risk
1084 premium, while the 1952-2001 period provides the highest risk premium
1085 for the S&P Public Utilities. Within these bounds, a common equity risk
1086 premium of 5.32% ($5.24\% + 5.39\% = 10.63\% \div 2$) is shown from data
1087 covering the periods 1974-2001 and 1979-2001. Therefore, 5.32%
1088 represents a reasonable risk premium for the S&P Public Utilities in this
1089 case.

1090 As noted earlier in my fundamental risk analysis, differences in
1091 risk characteristics must be taken into account when applying the results
1092 for the S&P Public Utilities to the Water Group and Gas Distribution
1093 Group. I previously enumerated various differences in fundamental
1094 among IAWC, the Water Group, the Gas Distribution Group and the S&P

1095 Public Utilities, including size, market ratios, common equity ratio, return
 1096 on book equity, operating ratios, coverage, quality of earnings, internally
 1097 generated funds, and betas. In my opinion, these differences indicate that
 1098 4.75% represents a reasonable common equity risk premium for the Water
 1099 Group and 5.00% represents a reasonable common equity risk premium
 1100 for the Gas Distribution Group. This represents approximately 88%
 1101 $(4.75\% \div 5.32\% = 0.83)$ of the risk premium of the S&P Public Utilities
 1102 and is reflective of the risk of the Water Group compared with that of the
 1103 S&P Public Utilities. For the Gas Distribution Group, the common equity
 1104 risk premium is 94% $(5.00\% \div 5.32\% = 0.94)$ of that of the S&P Public
 1105 Utilities.

1106 48. Q. What common equity cost rate would be appropriate using this equity risk
 1107 premium and the yield on long-term public utility debt?

1108 A. The cost of equity (i.e., “ k ”) is represented by the sum of the prospective
 1109 yield for long-term public utility debt (i.e., “ i ”) and the equity risk
 1110 premium (i.e., “ RP ”). The Risk Premium approach provides a cost of
 1111 equity of:

$$i + RP = k$$

| | | |
|------|------------------------|-----------------------------|
| 1113 | Water Group | $7.25\% + 4.75\% = 12.00\%$ |
| 1114 | Gas Distribution Group | $7.25\% + 5.00\% = 12.25\%$ |

1115 **VII. CAPITAL ASSET PRICING MODEL**

1116 49. Q. How have you used the Capital Asset Pricing Model to measure the cost
 1117 of equity in this case?

1118 A. I have used the Capital Asset Pricing Model (“CAPM”) in addition to my
1119 other methods. As with other models of the cost of equity, the CAPM
1120 contains a variety of assumptions, as I discuss in IAWC Exhibit 7.8.
1121 Therefore, this method should be used with other methods to measure the
1122 cost of equity as each will complement the other and will provide a result
1123 that will alleviate the unavoidable shortcomings found in each method.

1124 50. Q. What are the features of the CAPM as you have used it?

1125 A. The CAPM uses a yield on a risk-free interest bearing obligation plus a
1126 return representing a premium that is proportional to the systematic risk of
1127 an investment. The details of my use of the CAPM and evidence in
1128 support of my conclusions are set forth in IAWC Exhibit 7.8. To compute
1129 the cost of equity with the CAPM, three components are necessary: a risk-
1130 free rate of return (“ R_f ”), the beta measure of systematic risk (“ β ”), and the
1131 market risk premium (“ $R_m - R_f$ ”) derived from the total return on the
1132 market of equities reduced by the risk-free rate of return. The CAPM
1133 specifically accounts for differences in systematic risk (i.e., market risk as
1134 measured by the beta) between an individual firm or group of firms and
1135 the entire market of equities. As such, to calculate the CAPM it is
1136 necessary to employ firms with traded stocks. In this regard, I performed
1137 a CAPM calculation for the Water Group and the Gas Distribution Group.
1138 In contrast, my Risk Premium approach also considers industry- and
1139 company- specific factors because it is not limited to measuring just
1140 systematic risk. As a consequence, my Risk Premium approach is more

1141 comprehensive than the CAPM. In addition, the Risk Premium approach
1142 provides a better measure of the cost of equity because it is founded upon
1143 the yields on corporate bonds rather than Treasury bonds. Due to the
1144 disconnection of the yields on corporate and Treasury bonds, the Risk
1145 Premium approach is preferable at this time.

1146 51. Q. What betas have you considered in the CAPM?

1147 A. For my CAPM analysis, I initially considered the Value Line betas. As
1148 shown on page 1 of Schedule 11 of IAWC Exhibit 8.0, the average Value
1149 Line beta is .55 for the Water Group and .59 for the Gas Distribution
1150 Group.

1151 52. Q. What betas have you used in the CAPM determined cost of equity?

1152 A. The betas must be reflective of the financial risk associated with the
1153 ratesetting capital structure that is measured at book value. Therefore, the
1154 Value Line betas cannot be used directly in the CAPM unless those betas
1155 are applied to capital structures measured with market values. To develop
1156 a CAPM cost rate applicable to a book value capital structure, the Value
1157 Line betas have been unleveraged and releveraged for the common equity
1158 ratios using book values. This adjustment has been made with the
1159 formula:

1160
$$\beta l = \beta u [1 + (1 - t) D/E + P/E]$$

1161 where βl = the leveraged beta, βu = the unleveraged beta, t = income tax
1162 rate, D = debt ratio, P = preferred stock ratio, and E = common equity
1163 ratio. The average of the betas published by Value Line have been

1164 calculated with the market price of stock and therefore are related to the
1165 market value capitalization that contains a 67.98% common equity ratio
1166 for the Water Group and a 65.96% common equity ratio for the Gas
1167 Distribution Group. By using the formula shown above and the capital
1168 structure ratios measured at their market values, their average betas would
1169 become .42 for the Water Group and .45 for the Gas Distribution Group,
1170 assuming they employed no leverage and were 100% equity financed.
1171 With the unleveraged betas as a basis, I calculated the leveraged beta of
1172 .71 for the Water Group and .69 for the Gas Distribution Group associated
1173 with their book value capital structures. The betas and their corresponding
1174 common equity ratios are:

| | <u>Market Values</u> | | <u>Book Values</u> | |
|-----------------------------|----------------------|----------------------------|--------------------|----------------------------|
| | <u>Beta</u> | <u>Common Equity Ratio</u> | <u>Beta</u> | <u>Common Equity Ratio</u> |
| 1175 Water Group | .55 | 67.98% | .71 | 48.90% |
| 1176 | | | | |
| 1177 | | | | |
| 1178 Gas Distribution Group | .59 | 65.96% | .69 | 53.10% |
| 1179 | | | | |
| 1180 | | | | |

1181 The leveraged betas that I employ in the CAPM cost of equity are .71 for
1182 the Water Group and .69 for the Gas Distribution Group.

1183 53. Q. What risk-free rate have you used in the traditional CAPM?

1184 A. For reasons explained in IAWC Exhibit 7.6, I have employed the yields on
1185 long-term Treasury bonds using both historical and forecast data to match
1186 the longer-term horizon associated with the ratesetting process. As shown
1187 on pages 2 and 3 of Schedule 11 of IAWC Exhibit 8.0, I provided the
1188 historical yields on long-term Treasury bonds. For the twelve months
1189 ended June 2002, the average yield was 5.55% as shown on page 3 of that

1190 schedule. For the six- and three-months ended June 2002, the yields on
 1191 long-term Treasury bonds were 5.69% and 5.76%, respectively. As shown
 1192 on page 4 of Schedule 11 of IAWC Exhibit 8.0, forecasts published by
 1193 Blue Chip Financial Forecasts on July 1, 2002 indicate that the yields on
 1194 long-term Treasury bonds are expected to be in the range of 5.6% to 6.2%
 1195 during the next six quarters. To conform to the use of the historical and
 1196 forecast data that I employed in my analysis, I have used a 5.50% risk-free
 1197 rate of return for CAPM purposes.

1198 54. Q. What market premium have you used in the traditional CAPM?

1199 A. As developed in IAWC Exhibit 7.8, my calculation of the market premium
 1200 is developed from both historical market performance (i.e., 7.0%) and with
 1201 the Value Line forecasts (i.e., 10.49%). The resulting market premium is
 1202 8.75% ($7.0\% + 10.49\% = 17.49\% \div 2$) which represents the average
 1203 market premium using the historical SBBI data and the forecasts by Value
 1204 Line.

1205 55. Q. What CAPM result have you determined using the traditional CAPM?

1206 A. Using the 5.50% risk-free rate of return, market betas of .71 for the Water
 1207 Group and .69 for the Gas Distribution Group, and the 8.75% market
 1208 premium, the following results are indicated which relate to book value.

$$1209 \quad R_f + \beta (R_m - R_f) = k$$

$$1210 \quad \text{Water Group} \quad 5.50\% + .71 (8.75\%) = 11.71\%$$

$$1211 \quad \text{Gas Distribution Group} \quad 5.50\% + .69 (8.75\%) = 11.54\%$$

1212 56. Q. Is the rate of return indicated by the CAPM fully reflective of the risk for

1213 the Water Group and the Gas Distribution Group?

1214 A. No. The book value related CAPM results are 11.71% for the Water
1215 Group and 11.54% the Gas Distribution Group. I should note that there
1216 would be an understatement of a firm's cost of equity with the CAPM
1217 unless the size of a firm is considered. That is to say, as the size of a firm
1218 decreases, its risk, and hence its required return increases. Moreover, in
1219 his discussion of the cost of capital, Professor Brigham has indicated that
1220 smaller firms have higher capital costs than otherwise similar larger firms
1221 (see Fundamentals of Financial Management, fifth edition, page 623).
1222 Also, the Fama/French study (see "The Cross-Section of Expected Stock
1223 Returns", The Journal of Finance, June 1992) established that size of a
1224 firm helps explain stock returns. In an October 15, 1995 article in Public
1225 Utility Fortnightly, entitled Equity and the Small-Stock Effect, by Michael
1226 Annin, it was demonstrated that the CAPM could understate the cost of
1227 equity significantly according to a company's size. This was further
1228 demonstrated in the SBBI Yearbook which indicated that the returns for
1229 stocks in lower deciles (i.e., smaller stocks) had returns in excess of those
1230 shown by the simple CAPM. In this regard, the Water Group had an
1231 average market capitalization of its equity of \$490 million which would
1232 place it in the seventh decile according to the size of the companies traded
1233 on the NYSE/AMEX/NASDAQ. The Gas Distribution Group's market
1234 capitalization is \$1,148 million placing it in the fifth decile category.
1235 Therefore, the Water Group must be viewed as a portfolio of low-cap

1236 stocks consisting of those in the 6th through 8th deciles and the Gas
1237 Distribution Group is a mid-cap portfolio consisting of the 3rd through 5th
1238 deciles. According to the SBBI 2001 Yearbook, this would indicate a size
1239 premium above the CAPM cost rate of 1.42% for the Water Group and
1240 0.72% for the Gas Distribution Group. Absent such an adjustment, the
1241 CAPM would understate the required return unless the average size of the
1242 groups are considered. The CAPM results would be 13.13% (11.71% +
1243 1.42%) with the size adjustment for the Water Group and 12.26% (11.54%
1244 + 0.72%) with the size adjustment for the Gas Distribution Group.

1245 **VIII. CREDIT QUALITY ISSUES AND CONCLUSION**

1246 57. Q. What credit quality issues must be considered as part of a fair rate of
1247 return determination for the Company?

1248 A. The Company must have the financial strength that will, at a minimum,
1249 permit it to maintain a financial profile that is commensurate with the
1250 requirements to obtain a solid investment grade bond rating. Although the
1251 Company does not have a public rating on its securities, the Company
1252 must have the financial strength characteristics which would support the
1253 credit quality that is equivalent to the investment grade rating. An affiliate
1254 -- American Water Capital Corporation ("AWCC") -- has recently taken
1255 on the role of raising debt from investors for the benefit of IAWC and
1256 other utility subsidiaries of AWW. The debt outstanding of IAWC
1257 continues to represent obligations of the Company to either investors

1258 directly or indirectly through AWCC. Indeed, the majority of the
1259 Company's debt outstanding continues to be held directly by investors.

1260 By using the Company's own capital structure ratios, it permits
1261 direct confirmation of the types of ratios used in credit analysis. This is
1262 important because the Company must contribute to the ability of AWCC
1263 to issue debt and avoid any cross-subsidization that would occur among
1264 affiliates, if weaker companies "traded on" the stronger financial condition
1265 of other affiliates, and for each affiliate to obtain an allocation of capital
1266 from AWCC. It is important, therefore, that the Commission provide the
1267 Company with an opportunity to experience an adequate rate of return so
1268 that the Company's pre-tax interest coverage conforms with the standards
1269 for an A credit quality rating, which I will subsequently discuss.

1270 A variety of quantitative and qualitative measures must be
1271 considered when assessing the credit quality of an appropriate rate of
1272 return on common equity. In quantitative terms, two of the measures of
1273 credit quality considered by the bond rating agencies are debt leverage and
1274 pre-tax interest coverage. In the area of coverage, the rate of return on
1275 common equity represents a critical component because it is the equity
1276 return that provides the margin whereby an interest coverage multiple
1277 greater than one is realized.

1278 58. Q. Why is it important that a utility maintain strong credit quality?

1279 A. I analyzed the Company's proposed rate of return by reference to two
1280 benchmarks of credit quality in order to satisfy the capital attraction and

1281 maintenance of credit standards of a fair rate of return. It is important that
1282 the Commission provide the Company with a reasonable opportunity to
1283 achieve adequate credit quality so that its financial condition is
1284 commensurate with its service obligations to customers. In the area of
1285 fixed charge coverage, the rate of return on common equity represents a
1286 critical component because it is the equity return that provides the margin
1287 whereby interest charges are earned more than one time. In this regard,
1288 coverage of the Company's senior capital costs reveals the level of
1289 protection that IAWC can supply for its fixed obligations. Normally,
1290 before-income tax coverage is used for the purpose of a company's debt
1291 interest coverage and overall after-income tax coverage is the measure
1292 employed with regard to interest charges and preferred stock dividends.

1293 Public utilities must compete in the capital markets to attract
1294 needed future capital and, as such, interest coverage should be used as a
1295 test to measure the adequacy of the rate of return. Of course, it is not the
1296 only factor to be considered in testing the appropriate rate of return and
1297 must be viewed in relation to an individual company's degree of financial
1298 leverage and cash flow benchmarks. Maintenance of a strong A bond
1299 rating financial profile is the appropriate regulatory objective and an AA
1300 bond rating should be encouraged. Although IAWC does not have a
1301 current credit quality rating from Standard & Poor's Corporation ("S&P")
1302 and Moody's Investor Service, Inc. ("Moody's"), the objective should be
1303 the opportunity to attain an A bond rating. In my opinion, an A bond

1304 rating is the minimum goal necessary to provide a public utility with a
1305 sufficient degree of financial flexibility in order to attract capital on
1306 reasonable terms during all economic conditions. Customers benefit from
1307 strong credit quality because the Company will be able to attain lower
1308 financing costs that are passed on to customers in the form of a lower
1309 embedded cost of debt.

1310 59. Q. What measures of credit quality have you considered in the context of the
1311 Company's proposed rate of return?

1312 A. Using a 37.5805% composite federal and state income tax rate, Schedule 1
1313 of IAWC Exhibit 8.0 shows that the pre-tax coverage of interest expense
1314 would be 3.62 times assuming that the Company could actually earn its
1315 8.01% weighted average cost of capital. The fixed charge coverages
1316 shown on Schedule 1 of IAWC Exhibit 8.0 were developed from the
1317 components used to calculate the weighted average cost of capital using
1318 the statutory federal and state income tax rates. Again, those coverages
1319 assume that the Company will be able to actually achieve an 11.015% rate
1320 of return on common equity that I recommend in this proceeding. The
1321 leverage shown on Schedule 1 of IAWC Exhibit 8.0 indicates a debt ratio
1322 of 54.85%. The pre-tax interest coverage and debt leverage shown on
1323 Schedule 1 of IAWC Exhibit 8.0 should be viewed in the context of S&P
1324 bond rating criteria that I previously discussed. The credit quality
1325 benchmarks established by S&P for a business profile "3" include pre-tax
1326 interest coverage of 2.8 times to 3.4 times and debt leverage of 47.5% to

1327 53.0% for an A bond rating. Therefore, the rate of return that IAWC has
1328 requested in this proceeding is reasonable.

1329 60. Q. What is your conclusion concerning the Company's cost of equity?

1330 A. Based upon the application of a variety of methods and models described
1331 previously, it is my opinion that the Company's cost of equity is at least
1332 11.015%. It is essential that the Commission employ a variety of
1333 techniques to measure the Company's cost of equity because of the
1334 limitations and infirmities that are inherent in each method. Indeed, my
1335 studies indicate that the Company's 11.015% rate of return on common
1336 equity is within the range of the results shown by the Water Group and the
1337 Gas Distribution Group. In reaching my conclusion that the Company's
1338 rate of return on common equity is 11.015%, I have considered the array
1339 of equity cost rates that would justify an equity return in the range of
1340 10.84% to 12.12%. I have recommended an 11.015% return on equity in
1341 order to help minimize the magnitude of the proposed rate increase.

1342 61. Q. Does this conclude your prepared direct testimony?

1343 A. Yes.

**EDUCATIONAL BACKGROUND, BUSINESS EXPERIENCE
AND QUALIFICATIONS**

I was awarded a degree of Bachelor of Science in Business Administration by Drexel University in 1971. While at Drexel, I participated in the Cooperative Education Program which included employment, for one year, with American Water Works Service Company, Inc., as an internal auditor, where I was involved in the audits of several operating water companies of the American Water Works System and participated in the preparation of annual reports to regulatory agencies and assisted in other general accounting matters.

Upon graduation from Drexel University, I was employed by American Water Works Service Company, Inc., in the Eastern Regional Treasury Department where my duties included preparation of rate case exhibits for submission to regulatory agencies, as well as responsibility for various treasury functions of the thirteen New England operating subsidiaries.

In 1973, I joined the Municipal Financial Services Department of Betz Environmental Engineers, a consulting engineering firm, where I specialized in financial studies for municipal water and wastewater systems.

In 1974, I joined Associated Utility Services, Inc., now known as AUS Consultants. I held various positions with the Utility Services Group of AUS Consultants, concluding my employment there as a Senior Vice President.

In 1994, I formed P. Moul & Associates, an independent financial and regulatory consulting firm. In my capacity as Managing Consultant and for the past twenty-eight years, I have continuously studied the rate of return requirements for cost of service-regulated firms. In this regard, I have supervised the preparation of rate of return studies which were employed in connection with my testimony and in the past

25 for other individuals. I have presented direct testimony on the subject of fair rate of return, evaluated rate
26 of return testimony of other witnesses, and presented rebuttal testimony.

27 My studies and prepared direct testimony have been presented before twenty-eight (28) federal,
28 state and municipal regulatory commissions, consisting of: the Federal Energy Regulatory Commission;
29 state public utility commissions in Alabama, Connecticut, Delaware, Florida, Georgia, Hawaii, Illinois,
30 Indiana, Iowa, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New
31 Hampshire, New Jersey, New York, North Carolina, Ohio, Tennessee, Pennsylvania, South Carolina,
32 Virginia, and West Virginia; and the Philadelphia Gas Commission. My testimony has been offered in
33 over 200 rate cases involving electric power, natural gas distribution and transmission, resource recovery,
34 solid waste collection and disposal, telephone, wastewater, and water service utility companies. While my
35 testimony has involved principally fair rate of return and financial matters, I have also testified on capital
36 allocations, capital recovery, cash working capital, income taxes, factoring of accounts receivable, and
37 take-or-pay expense recovery. My testimony has been offered on behalf of municipal and investor-
38 owned public utilities and for the staff of a regulatory commission. I have also testified at an Executive
39 Session of the State of New Jersey Commission of Investigation concerning the BPU regulation of solid
40 waste collection and disposal.

41 I was a co-author of a verified statement submitted to the Interstate Commerce Commission
42 concerning the 1983 Railroad Cost of Capital (Ex Parte No. 452). I was also co-author of comments
43 submitted to the Federal Energy Regulatory Commission regarding the Generic Determination of Rate of
44 Return on Common Equity for Public Utilities in 1985, 1986 and 1987 (Docket Nos. RM85-19-000,
45 RM86-12-000, RM87-35-000 and RM88-25-000). Further, I have been the consultant to the New
46 York Chapter of the National Association of Water Companies which represented the water utility group

47 in the Proceeding on Motion of the Commission to Consider Financial Regulatory Policies for New York
48 Utilities (Case 91-M-0509). I have also submitted comments to the Federal Energy Regulatory
49 Commission in its Notice of Proposed Rulemaking (Docket No. RM99-2-000) concerning Regional
50 Transmission Organizations and on behalf of the Edison Electric Institute in its intervention in the case of
51 Southern California Edison Company (Docket No. ER97-2355-000).

52 In late 1978, I arranged for the private placement of bonds on behalf of an investor-owned public
53 utility. I have assisted in the preparation of a report to the Delaware Public Service Commission relative
54 to the operations of the Lincoln and Ellendale Electric Company. I was also engaged by the Delaware
55 P.S.C. to review and report on the proposed financing and disposition of certain assets of Sussex Shores
56 Water Company (P.S.C. Docket Nos. 24-79 and 47-79). I was a co-author of a Report on Proposed
57 Mandatory Solid Waste Collection Ordinance prepared for the Board of County Commissioners of
58 Collier County, Florida.

59 I have been a consultant to the Bucks County Water and Sewer Authority concerning rates and
60 charges for wholesale contract service with the City of Philadelphia. My municipal consulting experience
61 also included an assignment for Baltimore County, Maryland, regarding the City/County Water Agreement
62 for Metropolitan District customers (Circuit Court for Baltimore County in Case 34/153/87-CSP-2636).

63 I am a member of the Society of Utility and Regulatory Financial Analysis (formerly the National
64 Society of Rate of Return Analysts) and have attended several Financial Forums sponsored by the
65 Society. I attended the first National Regulatory Conference at the Marshall-Wythe School of Law,
66 College of William and Mary. I also attended an Executive Seminar sponsored by the Colgate Darden
67 Graduate Business School of the University of Virginia concerning Regulated Utility Cost of Equity and the
68 Capital Asset Pricing Model. In October 1984, I attended a Standard & Poor's Seminar on the

69 Approach to Municipal Utility Ratings, and in May 1985, I attended an S&P Seminar on
70 Telecommunications Ratings.

71 My lecture and speaking engagements include:

| <u>Date</u> | <u>Occasion</u> | <u>Sponsor</u> |
|------------------|---|--|
| 72 April 2001 | 73 Thirty-third Financial Forum | 74 Society of Utility & Regulatory Financial Analysts |
| 75 December 2000 | 76 Pennsylvania Public Utility Law Conference: 77 Non-traditional Players 78 In the Water Industry | 79 Pennsylvania Bar Institute |
| 80 July 2000 | 81 EEI Member Workshop Developing Incentives Rates: 82 Application and Problems | 83 Edison Electric Institute |
| 84 February 2000 | 85 The Sixth Annual FERC Briefing | 86 Exnet and Bruder, Gentile & Marcoux, LLP |
| 87 March 1994 | 88 Seventh Annual Proceeding | 89 Electric Utility Business Environment Conference |
| 90 May 1993 | 91 Financial School | 92 New England Gas Assoc. |
| 93 April 1993 | 94 Twenty-Fifth Financial Forum | 95 National Society of Rate of Return Analysts |
| 96 June 1992 | 97 Rate and Charges Subcommittee 98 Annual Conference | 99 American Water Works Association |
| 100 May 1992 | 101 Rates School | 102 New England Gas Assoc. |
| 103 October 1989 | 104 Seventeenth Annual Eastern Utility Rate Seminar | 105 Water Committee of the National Association of Regulatory Utility Commissioners Florida Public Service Service Commission and University of Utah |
| 106 October 1988 | 107 Sixteenth Annual Eastern Utility Rate Seminar | 108 National Association of Regulatory Utility Commissioners, Florida Public Service Commission and Univer- sity of Utah |
| 109 May 1988 | Twentieth Financial Forum | National Society of Rate of Return Analysts |

| | | | |
|-----|----------------|---------------------|---------------------------|
| 110 | October 1987 | Fifteenth Annual | Water Committee of the |
| 111 | | Eastern Utility | National Association |
| 112 | | Rate Seminar | of Regulatory Utility |
| 113 | | | Commissioners, Florida |
| 114 | | | Public Service Commis- |
| 115 | | | sion and University of |
| 116 | | | Utah |
| 117 | September 1987 | Rate Committee | American Gas Association |
| 118 | | Meeting | |
| 119 | | | |
| 120 | <u>Date</u> | <u>Occasion</u> | <u>Sponsor</u> |
| 121 | | | |
| 122 | May 1987 | Pennsylvania | National Association of |
| 123 | | Chapter | Water Companies |
| 124 | | annual meeting | |
| 125 | October 1986 | Eighteenth | National Society of Rate |
| 126 | | Financial | of Return |
| 127 | | Forum | |
| 128 | October 1984 | Fifth National | American Bar Association |
| 129 | | on Utility | |
| 130 | | Ratemaking | |
| 131 | | Fundamentals | |
| 132 | March 1984 | Management Seminar | New York State Telephone |
| 133 | | | Association |
| 134 | February 1983 | The Cost of Capital | Temple University, School |
| 135 | | Seminar | of Business Admin. |
| 136 | May 1982 | A Seminar on | New Mexico State |
| 137 | | Regulation | University, Center for |
| 138 | | and The Cost of | Business Research |
| 139 | | Capital | and Services |
| 140 | October 1979 | Economics of | Brown University |
| 141 | | Regulation | |

RATESETTING PRINCIPLES

Under traditional cost of service regulation, an agency engaged in ratesetting, such as the Commission, serves as a substitute for competition. In setting rates, a regulatory agency must carefully consider the public's interest in reasonably priced, as well as safe and reliable, service. The level of rates must also provide an opportunity to earn a rate of return for the public utility and its investors that is commensurate with the risk to which the invested capital is exposed so that the public utility has access to the capital required to meet its service responsibilities to its customers. Without an opportunity to earn a fair rate of return, a public utility will be unable to attract sufficient capital required to meet its responsibilities over time.

It is important to remember that regulated firms must compete for capital in a global market with non-regulated firms, as well as municipal, state and federal governments. Traditionally, a public utility has been responsible under its service agreements for providing a particular type of service to its customers within a specific market area. Although this relationship with its customers has been changing, it remains quite different from a non-regulated firm which is free to enter and exit competitive markets in accordance with available business opportunities.

As established by the landmark Bluefield and Hope cases,¹ several tests must be satisfied to demonstrate the fairness or reasonableness of the rate of return. These tests include a determination of whether the rate of return is (i) similar to that of other financially sound businesses having similar or comparable risks, (ii) sufficient to ensure confidence in the financial integrity of the public utility, and (iii) adequate to maintain and support the credit of the utility, thereby enabling it to attract, on a reasonable cost basis, the funds necessary to satisfy its capital requirements so that it can meet the obligation to

¹ Bluefield Water Works & Improvement Co. v. P.S.C. of West Virginia, 262 U.S. 679 (1923) and F.P.C. v.

22 provide adequate and reliable service to the public.

23 A fair rate of return must not only provide the utility with the ability to attract new capital, it must
24 also be fair to existing investors. An appropriate rate of return which may have been reasonable at one
25 point in time may become too high or too low at a subsequent point in time, based upon changing business
26 risks, economic conditions and alternative investment opportunities. When applying the standards of a fair
27 rate of return, it must be recognized that the end result must provide for the payment of interest on the
28 company's debt, the payment of dividends on the company's stock, the recovery of costs associated with
29 securing capital, the maintenance of reasonable credit quality for the company, and support of the
30 company's financial condition, which today would include those measures of financial performance in the
31 areas of interest coverage and adequate cash flow derived from a reasonable level of earnings.

EVALUATION OF RISK

The rate of return required by investors is directly linked to the perceived level of risk. The greater the risk of an investment, the higher is the required rate of return necessary to compensate for that risk, all else being equal. Because investors will seek the highest rate of return available, considering the risk involved, the rate of return must at least equal the investor-required, market-determined cost of capital if public utilities are to attract the necessary investment capital on reasonable terms.

In the measurement of the cost of capital, it is necessary to assess the risk of a firm. The level of risk for a firm is often defined as the uncertainty of achieving expected performance, and is sometimes viewed as a probability distribution of possible outcomes. Hence, if the uncertainty of achieving an expected outcome is high, the risk is also high. As a consequence, high-risk firms must offer investors higher returns than low risk firms which pay less to attract capital from investors. This is because the level of uncertainty, or risk of not realizing expected returns, establishes the compensation required by investors in the capital markets. Of course, the risk of a firm must also be considered in the context of its ability to actually experience adequate earnings which conform to a fair rate of return. Thus, if there is a high probability that a firm will not perform well due to fundamentally poor market conditions, investors will demand a higher return.

The investment risk of a firm is comprised of its business risk and financial risk. Business risk is all risk other than financial risk, and is sometimes defined as the staying power of the market demand for a firm's product or service and the resulting inherent uncertainty of realizing expected pre-tax returns on the firm's assets. Business risk encompasses all operating factors, e.g., productivity, competition, management ability, etc. that bear upon the expected pre-tax operating income attributed to the fundamental nature of a firm's business. Financial risk results from a firm's use of borrowed funds (or similar sources of capital

23 with fixed payments) in its capital structure, i.e., financial leverage. Thus, if a firm did not employ financial
24 leverage by borrowing any capital, its investment risk would be represented by its business risk.

25 It is important to note that in evaluating the risk of regulated companies, financial leverage cannot
26 be considered in the same context as it is for non-regulated companies. Financial leverage has a different
27 meaning for regulated firms than for non-regulated companies. For regulated public utilities, the cost of
28 service formula gives the benefits of financial leverage to consumers in the form of lower revenue
29 requirements. For non-regulated companies, all benefits of financial leverage are retained by the common
30 stockholder. Although retaining none of the benefits, regulated firms bear the risk of financial leverage.
31 Therefore, a regulated firm's rate of return on common equity must recognize the greater financial risk
32 shown by the higher leverage typically employed by public utilities.

33 Although no single index or group of indices can precisely quantify the relative investment risk of a
34 firm, financial analysts use a variety of indicators to assess that risk. For example, the creditworthiness of
35 a firm is revealed by its bond ratings. If the stock is traded, the price-earnings multiple, dividend yield, and
36 beta coefficients (a statistical measure of a stock's relative volatility to the rest of the market) provide some
37 gauge of overall risk. Other indicators, which are reflective of business risk, include the variability of the
38 rate of return on equity, which is indicative of the uncertainty of actually achieving the expected earnings;
39 operating ratios (the percentage of revenues consumed by operating expenses, depreciation, and taxes
40 other than income tax), which are indicative of profitability; the quality of earnings, which considers the
41 degree to which earnings are the product of accounting principles or cost deferrals; and the level of
42 internally generated funds. Similarly, the proportion of senior capital in a company's capitalization is the
43 measure of financial risk which is often analyzed in the context of the equity ratio (i.e., the complement of
44 the debt ratio).

COST OF EQUITY--GENERAL APPROACH

Through a fundamental financial analysis, the relative risk of a firm must be established prior to the determination of its cost of equity. Any rate of return recommendation which lacks such a basis will inevitably fail to provide a utility with a fair rate of return except by coincidence. With a fundamental risk analysis as a foundation, standard financial models can be employed by using informed judgment. The methods which have been employed to measure the cost of equity include: the Discounted Cash Flow ("DCF") model, the Risk Premium ("RP") approach, the Capital Asset Pricing Models ("CAPM") and the Comparable Earnings ("CE") approach.

The traditional DCF model, while useful in providing some insight into the cost of equity, is not an approach that should be used exclusively. The divergence of stock prices from company-specific fundamentals can provide a misleading cost of equity calculation. As reported in The Wall Street Journal on June 6, 1991, a statistical study published by Goldman Sachs indicated that only 35% of stock price growth in the 1980's could be attributed to earnings and interest rates. Further, 38% of the rise in stock prices during the 1980's was attributed to unknown factors. The Goldman Sachs study highlights the serious limitations of a model, such as DCF, which is founded upon identification of specific variables to explain stock price growth. That is to say, when stock price growth exceeds growth in a company's earnings per share, models such as DCF will misspecify investor expected returns which are comprised of capital gains, as well as dividend receipts. As such, a combination of methods should be used to measure the cost of equity.

The Risk Premium analysis is founded upon the prospective cost of long-term debt, i.e., the yield that the public utility must offer to raise long-term debt capital directly from investors. To that yield must be added a risk premium in recognition of the greater risk of common equity over debt. This additional

23 risk is, of course, attributable to the fact that the payment of interest and principal to creditors has priority
24 over the payment of dividends and return of capital to equity investors. Hence, equity investors require a
25 higher rate of return than the yield on long-term corporate bonds.

26 The CAPM is a model not unlike the traditional Risk Premium. The CAPM employs the yield on
27 a risk-free interest-bearing obligation plus a premium as compensation for risk. Aside from the reliance on
28 the risk-free rate of return, the CAPM gives specific quantification to systematic (or market) risk as
29 measured by beta.

30 The Comparable Earnings approach measures the returns expected/experienced by other non-
31 regulated firms and has been used extensively in rate of return analysis for over a half century. However,
32 its popularity diminished in the 1970s and 1980s with the popularization of market-based models.
33 Recently, there has been renewed interest in this approach. Indeed, the financial community has
34 expressed the view that the regulatory process must consider the returns which are being achieved in the
35 non-regulated sector so that public utilities can compete effectively in the capital markets. Indeed, with
36 additional competition being introduced throughout the traditionally regulated pipeline and utility industries,
37 returns expected to be realized by non-regulated firms have become increasingly relevant in the ratesetting
38 process. The Comparable Earnings approach considers directly those requirements and it fits the
39 established standards for a fair rate of return set forth in the Bluefield and Hope decisions. The Hope
40 decision requires that a fair return for a utility must be equal to that earned by firms of comparable risk.

DISCOUNTED CASH FLOW ANALYSIS

Discounted Cash Flow ("DCF") theory seeks to explain the value of an economic or financial asset as the present value of future expected cash flows discounted at the appropriate risk-adjusted rate of return. Thus, if \$100 is to be received in a single payment 10 years subsequent to the acquisition of an asset, and the appropriate risk-related interest rate is 8%, the present value of the asset would be \$46.32 ($\text{Value} = \$100 \div (1.08)^{10}$) arising from the discounted future cash flow. Conversely, knowing the present \$46.32 price of an asset (where price = value), the \$100 future expected cash flow to be received 10 years hence shows an 8% annual rate of return implicit in the price and future cash flows expected to be received.

In its simplest form, the DCF theory considers the number of years from which the cash flow will be derived and the annual compound interest rate which reflects the risk or uncertainty associated with the cash flows. It is appropriate to reiterate that the dollar values to be discounted are future cash flows.

DCF theory is flexible and can be used to estimate value (or price) or the annual required rate of return under a wide variety of conditions. The theory underlying the DCF methodology can be easily illustrated by utilizing the investment horizon associated with a preferred stock not having an annual sinking fund provision. In this case, the investment horizon is infinite, which reflects the perpetuity of a preferred stock. If P represents price, Kp is the required rate of return on a preferred stock, and D is the annual dividend (P and D with time subscripts), the value of a preferred share is equal to the present value of the dividends to be received in the future discounted at the appropriate risk-adjusted interest rate, Kp . In this

$$P_0 = \frac{D_1}{(1 + Kp)} + \frac{D_2}{(1 + Kp)^2} + \frac{D_3}{(1 + Kp)^3} + \dots + \frac{D_n}{(1 + Kp)^n}$$

20 circumstance:

21 If $D_1 = D_2 = D_3 = \dots D_n$, as is the case for preferred stock, and n approaches infinity, as is the case for
22 non-callable preferred stock without a sinking fund, then this equation reduces to:

23

$$24 \quad P_0 = \frac{D_1}{K_p}$$

25

26 This equation can be used to solve for the annual rate of return on a preferred stock when the current
27 price and subsequent annual dividends are known. For example, with $D_1 = \$1.00$, and $P_0 = \$10$, then K_p
28 $= \$1.00 \div \10 , or 10%.

29 The dividend discount equation, first shown, is the generic DCF valuation model for all equities,
30 both preferred and common. While preferred stock generally pays a constant dividend, permitting the
31 simplification subsequently noted, common stock dividends are not constant. Therefore, absent some
32 other simplifying condition, it is necessary to rely upon the generic form of the DCF. If, however, it is
33 assumed that $D_1, D_2, D_3 \dots D_n$ are systematically related to one another by a constant growth rate (g), so
34 that $D_0 (1 + g) = D_1, D_1 (1 + g) = D_2, D_2 (1 + g) = D_3$ and so on approaching infinity, and if K_s (the
35 required rate of return on a common stock) is greater than g , then the DCF equation can be reduced to:

36

$$P_0 = \frac{D_1}{K_s - g} \text{ or } P_0 = \frac{D_0 (1 + g)}{K_s - g}$$

37 which is the periodic form of the "Gordon" model.¹ Proof of the DCF equation is found in all modern

1 Although the popular application of the DCF model is often attributed to the work of Myron J. Gordon in the

38 basic finance textbooks. This DCF equation can be easily solved as:

39
$$Ks = \frac{D_0(1+g)}{P_0} + g$$

40 which is the periodic form of the Gordon Model commonly applied in estimating equity rates of return in
41 rate cases. When used for this purpose, Ks is the annual rate of return on common equity demanded by
42 investors to induce them to hold a firm's common stock. Therefore, the variables D_0 , P_0 and g must be
43 estimated in the context of the market for equities, so that the rate of return, which a public utility is
44 permitted the opportunity to earn, has meaning and reflects the investor-required cost rate.

45 Application of the Gordon model with market derived variables is straightforward. For example,
46 using the most recent prior annualized dividend (D_0) of \$0.80, the current price (P_0) of \$10.00, and the
47 investor expected dividend growth rate (g) of 5%, the solution of the DCF formula provides a 13.4% rate
48 of return. The dividend yield component in this instance is 8.4%, and the capital gain component is 5%,
49 which together represent the total 13.4% annual rate of return required by investors. The capital gain
50 component of the total return may be calculated with two adjacent future year prices. For example, in the
51 eleventh year of the holding period, the price per share would be \$17.10 as compared with the price per
52 share of \$16.29 in the tenth year which demonstrates the 5% annual capital gain yield.

53 Some DCF devotees believe that it is more appropriate to estimate the required return on equity
54 with a model which permits the use of multiple growth rates. This may be a plausible approach to DCF,
55 where investors expect different dividend growth rates in the near term and long run. If two growth rates,
56 one near term and one long-run, are to be used in the context of a price (P_0) of \$10.00, a dividend (D_0)
57 of \$0.80, a near-term growth rate of 5.5%, and a long-run expected growth rate of 5.0% beginning at

mid-1950's, J.B. Williams explicated the DCF model in its present form nearly two decades earlier.

58 year 6, the required rate of return is 13.57% solved with a computer by iteration.

59 **Use of DCF in Ratesetting**

60 The DCF method can provide a misleading measure of the cost of equity in the ratesetting process
61 when stock prices diverge from book values by a significant margin. When the difference between share
62 values and book values is significant, the results from the DCF can result in a misspecified cost of equity
63 when those results are applied to book value. This is because investor expected returns, as described by
64 the DCF model, are related to the market value of common stock. This discrepancy is shown by the
65 following example. If it is assumed, hypothetically, that investors require a 12.5% return on their common
66 stock investment value (i.e., the market price per share) when share values represent 150% of book value,
67 investors would require a total annual return of \$1.50 per share on a \$12.00 market value to realize their
68 expectations. If, however, this 12.5% market-determined cost rate is applied to an original cost rate base
69 which is equivalent to the book value of common stock of \$8.00 per share, the utility's actual earnings per
70 share would be only \$1.00. This would result in a \$.50 per share earnings shortfall which would deny the
71 utility the ability to satisfy investor expectations.

72 As a consequence, a utility could not withstand these DCF results applied in a rate case and also
73 sustain its financial integrity. This is because \$1.00 of earnings per share and a 75% dividend payout ratio
74 would provide earnings retention growth of just 3.125% (i.e., $\$1.00 \times .75 = \0.75 , and $\$1.00 - \$0.75 =$
75 $\$0.25 \div \$8.00 = 3.125\%$). In this example, the earnings retention growth rate plus the 6.25% dividend
76 yield ($\$0.75 \div \12.00) would equal 9.375% (6.25% + 3.125%) as indicated by the DCF model. This
77 DCF result is the same as the utility's rate of dividend payments on its book value (i.e., $\$0.75 \div \$8.00 =$
78 9.375%). This situation provides the utility with no earnings cushion for its dividend payment because the
79 DCF result equals the dividend rate on book value (i.e., both rates are 9.375% in the example).

80 Moreover, if the price employed in my example were higher than 150% of book value, a "negative"
81 earnings cushion would develop and cause the need for a dividend reduction because the DCF result
82 would be less than the dividend rate on book value. For these reasons, the usefulness of the DCF method
83 significantly diminishes as market prices and book values diverge.

84 Further, there is no reason to expect that investors would necessarily value utility stocks equal to
85 their book value. In fact, it is rare that utility stocks trade at book value. Moreover, high market-to-book
86 ratios may be reflective of general market sentiment. Were regulators to use the results of a DCF model
87 that fails to produce the required return when applied to an original cost rate base, they would penalize a
88 company with high market-to-book ratios. This clearly would penalize a regulated firm and its investors
89 that purchased the stock at its current price. When investor expectations are not fulfilled, the market price
90 per share will decline and a new, different equity cost rate would be indicated from the lower price per
91 share. This condition suggests that the current price would be subject to disequilibrium and would not
92 allow a reasonable calculation of the cost of equity. This situation would also create a serious disincentive
93 for management initiative and efficiency. Within that framework, a perverse set of goals and rewards
94 would result, i.e., a high authorized rate of return in a rate case would be the reward for poor financial
95 performance, while low rates of return would be the reward for good financial performance.

96 **Dividend Yield**

97 The historical annual dividend yields for the Water Group are shown on Schedule 3 of IAWC
98 Exhibit 8.0. The 1997-2001 five-year average dividend yield was 3.9% for the Water Group. As shown
99 on Schedule 4 of IAWC Exhibit 8.0, the 1997-2001 five-year average dividend yield was 4.9% for the
100 Gas Distribution Group. The monthly dividend yields for the past twelve months are shown graphically on
101 Schedule 6 of IAWC Exhibit 8.0. These dividend yields reflect an adjustment to the month-end closing

prices to remove the pro rata accumulation of the quarterly dividend amount since the last ex-dividend date.

The ex-dividend date usually occurs two business days before the record date of the dividend (i.e., the date by which a shareholder must own the shares to be entitled to the dividend payment--usually about two to three weeks prior to the actual payment). During a quarter (here defined as 91 days), the price of a stock moves up rateably by the dividend amount as the ex-dividend date approaches. The stock's price then falls by the amount of the dividend on the ex-dividend date. Therefore, it is necessary to calculate the fraction of the quarterly dividend since the time of the last ex-dividend date and to remove that amount from the price. This adjustment reflects normal recurring pricing of stocks in the market, and establishes a price which will reflect the true yield on a stock.

A six-month average dividend yield has been used to recognize the prospective orientation of the ratesetting process as explained in the direct testimony. For the purpose of a DCF calculation, the average dividend yields must be adjusted to reflect the prospective nature of the dividend payments, i.e., the higher expected dividends for the future rather than the recent dividend payment annualized. An adjustment to the dividend yield component, when computed with annualized dividends, is required based upon investor expectation of quarterly dividend increases.

The procedure to adjust the average dividend yield for the expectation of a dividend increase during the initial investment period will be at a rate of one-half the growth component, developed below.

$$K = \frac{D_0(1+g)^0 + D_0(1+g)^1 + D_0(1+g)^2 + D_0(1+g)^3}{P_0} + g$$

The DCF equation, showing the quarterly dividend payments as D_0 , may be stated in this fashion:

The adjustment factor, based upon one-half the expected growth rate developed in my direct testimony, will be 2.875% (5.75% x .5) for the Water Group and 3.000% (6.00% x .5) for the Gas Distribution Group, which assumes that two dividend payments will be at the expected higher rate during the initial investment period. Using the six-month average dividend yield as a base, the prospective (forward) dividend yield would be 3.47% (3.37% x 1.02875) for the Water Group and 5.29% (5.14% x 1.03000) for the Gas Distribution Group.

Another DCF model that reflects the discrete growth in the quarterly dividend (D_0) is as follows:

$$K = \frac{D_0(1+g)^{.25} + D_0(1+g)^{.50} + D_0(1+g)^{.75} + D_0(1+g)^{1.00}}{P_0} + g$$

This procedure confirms the reasonableness of the forward dividend yield previously calculated. The quarterly discrete adjustment provides a dividend yield of 3.49% (3.37% x 1.03569) for the Water Group and 5.33% (5.14% x 1.03723) for the Gas Distribution Group. The use of an adjustment is required for the periodic form of the DCF in order to properly recognize that dividends grow on a discrete basis.

In either of the preceding DCF dividend yield adjustments, there is no recognition for the compound returns attributed to the quarterly dividend payments. Investors have the opportunity to reinvest quarterly dividend receipts. Recognizing the compounding of the periodic quarterly dividend payments (D_0), results in a third DCF formulation:

$$k = \left[\left(1 + \frac{D_0}{P_0} \right)^4 - 1 \right] + g$$

137 This DCF equation provides no further recognition of growth in the quarterly dividend. Combining
138 discrete quarterly dividend growth with quarterly compounding would provide the following DCF

$$k = \left[\left(1 + \frac{D_0(1+g)^{25}}{P_0} \right)^4 - 1 \right] + g$$

139 formulation, stating the quarterly dividend payments (D_0):

140 A compounding of the quarterly dividend yield provides another procedure to recognize the necessity for
141 an adjusted dividend yield. The unadjusted average quarterly dividend yield was 0.8425% ($3.37\% \div 4$)
142 for the Water Group and 1.2850% ($5.14\% \div 4$) for the Gas Distribution Group. The compound dividend
143 yield would be 3.46% ($1.00854^4 - 1$) for the Water Group and 5.32% ($1.01304^4 - 1$) for the Gas
144 Distribution Group, recognizing quarterly dividend payments in a forward-looking manner. These dividend
145 yields conform with investors' expectations in the context of reinvestment of their cash dividend.

146 For the Water Group, a 3.47% forward-looking dividend yield is the average ($3.47\% + 3.49\% +$
147 $3.46\% = 10.42\% \div 3$) of the adjusted dividend yield using the form $D_0/P_0 (1+.5g)$, the dividend yield
148 recognizing discrete quarterly growth, and the quarterly compound dividend yield with discrete quarterly
149 growth. For the Gas Distribution Group, the average adjusted dividend yield is 5.31% ($5.29\% + 5.33\%$
150 $+ 5.32\% = 15.94\% \div 3$).

151

Growth Rate

If viewed in its infinite form, the DCF model is represented by the discounted value of an endless stream of growing dividends. It would, however, require 100 years of future dividend payments so that the discounted value of those payments would equate to the present price so that the discount rate and the rate of return shown by the simplified Gordon form of the DCF model would be about the same. A century of dividend receipts represents an unrealistic investment horizon from almost any perspective. Because stocks are not held by investors forever, the growth in the share value (i.e., capital appreciation, or capital gains yield) is most relevant to investors' total return expectations. Hence, investor expected returns in the equity market are provided by capital appreciation of the investment as well as receipt of dividends. As such, the sale price of a stock can be viewed as a liquidating dividend which can be discounted along with the annual dividend receipts during the investment holding period to arrive at the investor expected return.

In its constant growth form, the DCF assumes that with a constant return on book common equity and constant dividend payout ratio, a firm's earnings per share, dividends per share and book value per share will grow at the same constant rate, absent any external financing by a firm. Because these constant growth assumptions do not actually prevail in the capital markets, the capital appreciation potential of an equity investment is best measured by the expected growth in earnings per share. Since the traditional form of the DCF assumes no change in the price-earnings multiple, the value of a firm's equity will grow at the same rate as earnings per share. Hence, the capital gains yield is best measured by earnings per share growth using company-specific variables.

Investors consider both historical and projected data in the context of the expected growth rate for a firm. An investor can compute historical growth rates using compound growth rates or growth rate

trend lines. Otherwise, an investor can rely upon published growth rates as provided in widely-circulated, influential publications. However, a traditional constant growth DCF analysis that is limited to such inputs suffers from the assumption of no change in the price-earnings multiple, i.e., that the value of a firm's equity will grow at the same rate as earnings. Some of the factors which actually contribute to investors' expectations of earnings growth and which should be considered in assessing those expectations, are: (i) the earnings rate on existing equity, (ii) the portion of earnings not paid out in dividends, (iii) sales of additional common equity, (iv) reacquisition of common stock previously issued, (v) changes in financial leverage, (vi) acquisitions of new business opportunities, (vii) profitable liquidation of assets, and (viii) repositioning of existing assets. The realities of the equity market regarding total return expectations, however, also reflect factors other than these inputs. Therefore, the DCF model contains overly restrictive limitations when the growth component is stated in terms of earnings per share (the basis for the capital gains yield) or dividends per share (the basis for the infinite dividend discount model). In these situations, there is inadequate recognition of the capital gains yields arising from stock price growth which could exceed earnings or dividends growth.

To assess the growth component of the DCF, analysts' projections of future growth influence investor expectations as explained above. One influential publication is The Value Line Investment Survey which contains estimated future projections of growth. The Value Line Investment Survey provides growth estimates which are stated within a common economic environment for the purpose of measuring relative growth potential. The basis for these projections is the Value Line 3 to 5 year hypothetical economy. The Value Line hypothetical economic environment is represented by components and subcomponents of the National Income Accounts which reflect in the aggregate assumptions concerning the unemployment rate, manpower productivity, price inflation, corporate income tax rate, high-grade

corporate bond interest rates, and Fed policies. Individual estimates begin with the correlation of sales, earnings and dividends of a company to appropriate components or subcomponents of the future National Income Accounts. These calculations provide a consistent basis for the published forecasts. Value Line's evaluation of a specific company's future prospects are considered in the context of specific operating characteristics that influence the published projections. Of particular importance for regulated firms, Value Line considers the regulatory quality, rates of return recently authorized, the historic ability of the firm to actually experience the authorized rates of return, the firm's budgeted capital spending, the firm's financing forecast, and the dividend payout ratio. The wide circulation of this source and frequent reference to Value Line in financial circles indicate that this publication has an influence on investor judgment with regard to expectations for the future.

There are other sources of earnings growth forecasts. One of these sources is the Institutional Brokers Estimate System ("IBES"). The IBES service provides data on consensus earnings per share forecasts and five-year earnings growth rate estimates. The earnings estimates are obtained from financial analysts at brokerage research departments and from institutions whose securities analysts are projecting earnings for companies in the IBES universe of companies. The IBES forecasts provide the basis for the earnings estimates published in the S&P Earnings Guide which covers 3000 publicly traded stocks. Other services that tabulate earnings forecasts and publish them are Zacks Investment Research, First Call/Thomson Financial, and Market Guide. As with the IBES forecasts, Zacks, First Call/Thomson and Market Guide provide consensus forecasts collected from analysts for most publically traded companies.

In each of these publications, forecasts of earnings per share for the current and subsequent year receive prominent coverage. That is to say, IBES, Zacks, First Call/Thomson, Market Guide, and Value Line show estimates of current-year earnings and projections for the next year. While the DCF model

217 typically focusses upon long-run estimates of growth, stock prices are clearly influenced by current and
218 near-term earnings prospects. Therefore, the near-term earnings per share growth rates should also be
219 factored into a growth rate determination.

220 Although forecasts of future performance are investor influencing², equity investors may also rely
221 upon the observations of past performance. Investors' expectations of future growth rates may be
222 determined, in part, by an analysis of historical growth rates. It is apparent that any serious investor would
223 advise himself/herself of historical performance prior to taking an investment position in a firm. Earnings
224 per share and dividends per share represent the principal financial variables which influence investor
225 growth expectations.

226 Other financial variables are sometimes considered in rate case proceedings. For example, a
227 company's internal growth rate, derived from the return rate on book common equity and the related
228 retention ratio, is sometimes considered. This growth rate measure is represented by the Value Line
229 forecast "BxR" shown on Schedule 8 of IAWC Exhibit 8.0. Internal growth rates are often used as a
230 proxy for book value growth. Unfortunately, this measure of growth is often not reflective of investor-
231 expected growth. This is especially important when there is an indication of a prospective change in
232 dividend payout ratio, earned return on book common equity, change in market-to-book ratios or other
233 fundamental changes in the character of the business. Nevertheless, I have also shown the historical and
234 projected growth rates in book value per share and internal growth rates.

2 As shown in a National Bureau of Economic Research monograph by John G. Cragg and Burton G. Malkiel, Expectations and the Structure of Share Prices, University of Chicago Press 1982.

INTEREST RATES

Interest rates can be viewed in their traditional nominal terms (i.e., the stated rate of interest) and in real terms (i.e., the stated rate of interest less the expected rate of inflation). Absent consideration of inflation, the real rate of interest is determined generally by supply factors which are influenced by investors willingness to forego current consumption (i.e., to save) and demand factors that are influenced by the opportunities to derive income from productive investments. Added to the real rate of interest is compensation required by investors for the inflationary impact of the declining purchasing power of their income received in the future. While interest rates are clearly influenced by the changing annual rate of inflation, it is important to note that the expected rate of inflation, that is reflected in current interest rates, may be quite different than the prevailing rate of inflation.

Rates of interest also vary by the type of interest bearing instrument. Investors require compensation for the risk associated with the term of the investment and the risk of default. The risk associated with the term of the investment is usually shown by the yield curve, i.e., the difference in rates across maturities. The typical structure is represented by a positive yield curve which provides progressively higher interest rates as the maturities are lengthened. Flat (i.e., relatively level rates across maturities) or inverted (i.e., higher short-term rates than long-term rates) yield curves occur less frequently.

The risk of default is typically associated with the creditworthiness of the borrower. Differences in interest rates can be traced to the credit quality ratings assigned by the bond rating agencies, such as Moody's Investors Service, Inc. and Standard & Poor's Corporation. Obligations of the United States Treasury are usually considered to be free of default risk, and hence reflect only the real rate of interest,

1 compensation for expected inflation, and maturity risk. The Treasury has been issuing inflation-indexed
2 notes which automatically provide compensation to investors for future inflation, thereby providing a lower
3 current yield on these issues.

4 **Interest Rate Environment**

5 Federal Reserve Board ("Fed") policy actions which impact directly short-term interest rates also
6 substantially affect investor sentiment in long-term fixed-income securities markets. In this regard, the Fed
7 has often pursued policies designed to build investor confidence in the fixed-income securities market.
8 Formative Fed policy has had a long history, as exemplified by the historic 1951 Treasury-Federal
9 Reserve Accord, and more recently, deregulation within the financial system which increased the level and
10 volatility of interest rates. The Fed has indicated that it will follow a monetary policy designed to promote
11 noninflationary economic growth.

12 As background to the recent levels of interest rates, history shows that the Open Market
13 Committee of the Federal Reserve board ("FOMC") began a series of moves toward lower short-term
14 interest rates in mid-1990 -- at the outset of the last recession. Monetary policy was influenced at that
15 time by (i) steps taken to reduce the federal budget deficit, (ii) slowing economic growth, (iii) rising
16 unemployment, and (iv) measures intended to avoid a credit crunch. Thereafter, the Federal government
17 initiated several bold proposals to deal with future borrowings by the Treasury. With lower expected
18 federal budget deficits and reduced Treasury borrowings, together with limitations on the supply of new
19 30-year Treasury bonds, long-term interest rates declined to a twenty-year low, reaching a trough of
20 5.78% in October 1993.

21 On February 4, 1994, the FOMC began a series of increases in the Fed Funds rate (i.e., the

1 interest rate on excess overnight bank reserves). The initial increase represented the first rise in short-term
2 interest rates in five years. The series of seven increases doubled the Fed Funds rate to 6%. The
3 increases in short-term interest rates also caused long-term rates to move up, continuing a trend which
4 began in the fourth quarter of 1993. The cyclical peak in long-term interest rates was reached on
5 November 7 and 14, 1994 when 30-year Treasury bonds attained an 8.16% yield. Thereafter, long-term
6 Treasury bond yields generally declined.

7 Beginning in mid-February 1996, long-term interest rates moved upward from their previous lows.
8 After initially reaching a level of 6.75% on March 15, 1996, long-term interest rates continued to climb
9 and reached a peak of 7.19% on July 5 and 8, 1996. For the period leading up to the 1996 Presidential
10 election, long-term Treasury bonds generally traded within this range. After the election, interest rates
11 moderated, returning to a level somewhat below the previous trading range. Thereafter, in December
12 1996, interest rates returned to a range of 6.5% to 7.0% which existed for much of 1996.

13 On March 25, 1997, the FOMC decided to tighten monetary conditions through a one-quarter
14 percentage point increase in the Fed Funds rate. This tightening increased the Fed Funds rate to 5.5%,
15 although the discount rate was not changed and remained at 5%. In making this move, the FOMC stated
16 that it was concerned by persistent strength of demand in the economy, which it feared would increase the
17 risk of inflationary imbalances that could eventually interfere with the long economic expansion.

18 In the fourth quarter of 1997, the yields on Treasury bonds began to decline rapidly in response to
19 an increase in demand for Treasury securities caused by a flight to safety triggered by the currency and
20 stock market crisis in Asia. Liquidity provided by the Treasury market makes these bonds an attractive
21 investment in times of crisis. This is because Treasury securities encompass a very large market which

1 provides ease of trading and carry a premium for safety. During the fourth quarter of 1997, Treasury
2 bond yields pierced the psychologically important 6% level for the first time since 1993.

3 Through the first half of 1998, the yields on long-term Treasury bonds fluctuated within a range of
4 about 5.6% to 6.1% reflecting their attractiveness and safety. In the third quarter of 1998, there was
5 further deterioration of investor confidence in global financial markets. This loss of confidence followed
6 the moratorium (i.e., default) by Russia on its sovereign debt and fears associated with problems in Latin
7 America. While not significant to the global economy in the aggregate, the August 17 default by Russia
8 had a significant negative impact on investor confidence, following earlier discontent surrounding the crisis
9 in Asia. These events subsequently led to a general pull back of risk-taking as displayed by banks
10 growing reluctance to lend, worries of an expanding credit crunch, lower stock prices, and higher yields on
11 bonds of riskier companies. These events contributed to the failure of the hedge fund, Long-Term Capital
12 Management.

13 In response to these events, the FOMC cut the Fed Funds rate just prior to the mid-term
14 Congressional elections. The FOMC's action was based upon concerns over how increasing weakness in
15 foreign economies would affect the U.S. economy. As recently as July 1998, the FOMC had been more
16 concerned about fighting inflation than the state of the economy. The initial rate cut was the first of three
17 reductions by the FOMC. Thereafter, the yield on long-term Treasury bonds reached a 30-year low of
18 4.70% on October 5, 1998. Long-term Treasury yields below 5% had not been seen since 1967. Unlike
19 the first rate cut that was widely anticipated, the second rate reduction by the FOMC was a surprise to the
20 markets. A third reduction in short-term interest rates occurred in November 1998 when the FOMC
21 reduced the discount rate to 4.5% and the Fed Funds rate to 4.75%.

1 All of these events prompted an increase in the prices for Treasury bonds which lead to the low
2 yields described above. Another factor that contributed to the decline in yields on long-term Treasury
3 bonds was a reduction in the supply of new Treasury issues coming to market due to the Federal budget
4 surplus -- the first in nearly 30 years. The dollar amount of Treasury bonds being issued declined by 30%
5 in two years thus resulting in higher prices and lower yields. In addition, rumors of some struggling hedge
6 funds unwinding their positions further added to the gains in Treasury bond prices.

7 The financial crisis that spread from Asia to Russia and to Latin America pushed nervous investors
8 from stocks into Treasury bonds, thus increasing demand for bonds, just when supply was shrinking.
9 There was also a move from corporate bonds to Treasury bonds to take advantage of appreciation in the
10 Treasury market. This resulted in a certain amount of exuberance for Treasury bond investments that
11 formerly was reserved for the stock market. Moreover, yields in the fourth quarter of 1998 became
12 extremely volatile as shown by Treasury yields that fell from 5.10% on September 29 to 4.70 percent on
13 October 5, and thereafter returned to 5.10% on October 13. A decline and rebound of 40 basis points in
14 Treasury yields in a two-week time frame is remarkable.

15 Beginning in mid-1999, the FOMC raised interest rates on six occasions reversing its actions in
16 the fall of 1998. On June 30, 1999, August 24, 1999, November 16, 1999, February 2, 2000, March
17 21, 2000, and May 16, 2000, the FOMC raised the Fed Funds rate to 6.50%. This brought the Fed
18 Funds rate to its highest level since 1991, and was 175 basis points higher than the level that occurred at
19 the height of the Asian currency and stock market crisis. Similarly, the FOMC increased the discount rate
20 to 6.00% with its actions on August 24, 1999, November 16, 1999, February 2, 2000, March 21, 2000,
21 and May 16, 2000. This brought the discount rate up by one and one-half percentage points from its low

1 in the fourth quarter of 1998. At the time, these actions were taken in response to more normally
2 functioning financial markets, tight labor markets, and a reversal of the monetary ease that was required
3 earlier in response to the global financial market turmoil.

4 As the year 2000 drew to a close, economic activity slowed and consumer confidence began to
5 weaken. In two steps at the beginning and at the end of January 2001, the FOMC reduced the Fed
6 Funds rate by one percentage point. These actions brought the Fed Funds rate to 5.50% and the discount
7 rate was also lowered to 5.00%. The FOMC described its actions as “a rapid and forceful response of
8 monetary policy” to eroding consumer and business confidence exemplified by weaker retail sales and
9 business spending on capital equipment and cut backs in manufacturing production. Subsequently, on
10 March 20, 2001, April 18, 2001, May 15, 2001, June 27, 2001, and August 21, 2001, the FOMC
11 lowered the Fed Funds and discount rate in steps consisting of three 50 basis points decrements followed
12 by two 25 basis points decrement. These actions took the Fed Funds rate to 3.50% and the discount rate
13 to 3.00%. The FOMC observed on August 21, 2001:

14 “Household demand has been sustained, but business profits and
15 capital spending continue to weaken and growth abroad is slowing,
16 weighing on the U.S. economy. The associated easing of pressures on
17 labor and product markets is expected to keep inflation contained.

18
19 Although long-term prospects for productivity growth and the economy
20 remain favorable, the Committee continues to believe that against the
21 background of its long-run goals of price stability and sustainable
22 economic growth and of the information currently available, the risks
23 are weighted mainly toward conditions that may generate economic
24 weakness in the foreseeable future.”
25

26 After the terrorist attack on September 11, 2001, the FOMC made two additional 50 basis points
27 reductions in the Fed Funds rate and discount rate. The first reduction occurred on September 17, 2001

1 and followed the four-day closure of the financial markets following the terrorist attacks. The second
2 reduction occurred at the October 2 meeting of the FOMC where it observed:

3 “The terrorist attacks have significantly heightened uncertainty in an
4 economy that was already weak. Business and household spending as
5 a consequence are being further damped. Nonetheless, the long-term
6 prospects for productivity growth and the economy remain favorable
7 and should become evident once the unusual forces restraining demand
8 abate.”
9

10 Afterward, the FOMC reduced the Fed Funds rate and discount rate by 50 basis points on November 6,
11 2001 and by 25 basis points on December 11, 2001. In total, short-term interest rates were reduced by
12 the FOMC eleven (11) times during the year 2001. These actions cut the Fed Funds rate and discount
13 rates by 4.75% and resulted in 1.75% for the Fed Funds rate and 1.25% for the discount rate at year-end
14 2001. As noted by the FOMC at its June 26, 2002 meeting where interest rates were kept unchanged:

15 “The information that has become available since the last meeting of the
16 Committee confirms that economic activity is continuing to increase.
17 However, both the upward impetus from the swing in inventory
18 investment and the growth in final demand appear to have moderated.
19 The Committee expects the rate of increase of final demand to pick up
20 over coming quarters, supported in part by robust underlying growth in
21 productivity, but the degree of the strengthening remains uncertain.
22

23 In these circumstances, although the stance of monetary policy is
24 currently accommodative, the Committee believes that, for the
25 foreseeable future, against the background of its long run goals of price
26 stability and sustainable economic growth and of the information
27 currently available, the risks are balanced with respect to the prospects
28 for both goals.”
29

30 **Public Utility Bond Yields**

31 The Risk Premium analysis of the cost of equity is represented by the combination of a firm's
32 borrowing rate for long-term debt capital plus a premium that is required to reflect the additional risk

1 associated with the equity of a firm as explained in IAWC Exhibit 7.7. Due to the senior nature of the
2 long-term debt of a firm, its cost is lower than the cost of equity due to the prior claim which lenders have
3 on the earnings and assets of a corporation.

4 As a generalization, all interest rates track to varying degrees of the benchmark yields established
5 by the market for Treasury securities. Public utility bond yields usually reflect the underlying Treasury yield
6 associated with a given maturity plus a spread to reflect the specific credit quality of the issuing public
7 utility. Market sentiment can also have an influence on the spreads as described below. The spread in the
8 yields on public utility bonds and Treasury bonds varies with market conditions, as does the relative level
9 of interest rates at varying maturities shown by the yield curve.

10 Pages 1 and 2 of Schedule 9 of IAWC Exhibit 8.0 provide the recent history of long-term (i.e.,
11 maturities as close as possible to 30 years) public utility bond yields for each of the "investment grades"
12 (i.e., Aaa, Aa, A and Baa). The top four rating categories shown on Schedule 9 of IAWC Exhibit 8.0 are
13 generally regarded as eligible for bank investments under commercial banking regulations. These
14 investment grades are distinguished from "junk" bonds which have ratings of Ba and below.

15 A relatively long history of the spread between the yields on long-term A rated public utility bonds
16 and long-term Treasury bonds is shown on page 3 of Schedule 9 of IAWC Exhibit 8.0. There, it is shown
17 that the spread in these yields declined after the 1987 stock market crash. Those spreads stabilized at
18 about the one percentage point level for the years 1992 through 1997. With the aversion to risk and flight
19 to quality described earlier, a significant widening of the spread in the yields between corporate (e.g.,
20 public utility) and Treasury bonds developed in 1998, after an initial widening of the spread that began in
21 the fourth quarter of 1997. The significant widening of spreads in 1998 was unexpected by some

1 technically savvy investors, as shown by the debacle at the Long-Term Capital Management hedge fund.
2 When Russia defaulted its debt on August 17, some investors had to cover short positions when Treasury
3 prices spiked upward. Short covering by investors that guessed wrong on the relationship between
4 corporate and Treasury bonds also contributed to run-up in Treasury bond prices by increasing the
5 demand for them. This helped to contribute to a widening of the spreads between corporate and Treasury
6 bonds.

7 As indicated by the dynamics described earlier, there has been a disconnection from the previous
8 relationship between the yields on corporate debt and Treasury bonds. As shown on page 3 of Schedule
9 9 of IAWC Exhibit 8.0, the spread in yields between A rated public utility bonds and long-term Treasury
10 bonds widened from about one percentage point prior to 1998 to 1.46% in 1998, 1.75% in 1999, 2.30%
11 in 2000, and 2.27% in 2001. In essence, the cost of corporate debt and equity has disconnected from the
12 yields on long-term Treasury bonds due to a general aversion to risk and the shrinking supply of long-term
13 Treasury bonds. As shown by the data presented graphically on pages 4 and 5 of Schedule 9 of IAWC
14 Exhibit 8.0, the interest rate spread between the yields on long-term Treasury bonds and A rated public
15 utility bonds was 1.78 percentage points for the four months ended June 2002. This situation continues to
16 point to the high cost of corporate capital vis-à-vis the yield on Treasury obligations.

17 **Risk-Free Rate of Return in the CAPM**

18 Regarding the risk-free rate of return (see IAWC Exhibit 7.8), pages 2 and 3 of Schedule 11 of
19 IAWC Exhibit 8.0 provide the yields on the broad spectrum of Treasury Notes and Bonds. Some
20 practitioners of the CAPM would advocate the use of short-term treasury yields (and some would argue
21 for the yields on 91-day Treasury Bills). Other advocates of the CAPM would advocate the use of

1 longer-term treasury yields as the best measure of a risk-free rate of return. As Ibbotson has indicated:

2 The Cost of Capital in a Regulatory Environment. When discounting cash
3 flows projected over a long period, it is necessary to discount them by a long-
4 term cost of capital. Additionally, regulatory processes for setting rates often
5 specify or suggest that the desired rate of return for a regulated firm is that
6 which would allow the firm to attract and retain debt and equity capital over
7 the long term. Thus, the long-term cost of capital is typically the appropriate
8 cost of capital to use in regulated ratesetting. (Stocks, Bonds, Bills and
9 Inflation - 1992 Yearbook, pages 118-119)

10
11 As indicated above, long-term Treasury bond yields represent the correct measure of the risk-free rate of
12 return in the traditional CAPM. Very short term yields on Treasury bills should be avoided for several
13 reasons. First, rates should be set on the basis of financial conditions that will exist during the effective
14 period of the proposed rates. Second, 91-day Treasury bill yields are more volatile than longer-term
15 yields and are greatly influenced by FOMC monetary policy, political, and economic situations.
16 Moreover, Treasury bill yields have been shown to be empirically inadequate for the CAPM. Some
17 advocates of the theory would argue that the risk-free rate of return in the CAPM should be derived from
18 quality long-term corporate bonds.

RISK PREMIUM ANALYSIS

The cost of equity requires recognition of the risk premium required by common equities over long-term corporate bond yields. In the case of senior capital, a company contracts for the use of long-term debt capital at a stated coupon rate for a specific period of time and in the case of preferred stock capital at a stated dividend rate, usually with provision for redemption through sinking fund requirements. In the case of senior capital, the cost rate is known with a high degree of certainty because the payment for use of this capital is a contractual obligation, and the future schedule of payments is known. In essence, the investor-expected cost of senior capital is equal to the realized return over the entire term of the issue, absent default.

The cost of equity, on the other hand, is not fixed, but rather varies with investor perception of the risk associated with the common stock. Because no precise measurement exists as to the cost of equity, informed judgment must be exercised through a study of various market factors which motivate investors to purchase common stock. In the case of common equity, the realized return rate may vary significantly from the expected cost rate due to the uncertainty associated with earnings on common equity. This uncertainty highlights the added risk of a common equity investment.

As one would expect from traditional risk and return relationships, the cost of equity is affected by expected interest rates. As noted in IAWC Exhibit 7.6, yields on long-term corporate bonds traditionally consist of a real rate of return without regard to inflation, an increment to reflect investor perception of expected future inflation, the investment horizon shown by the term of the issue until maturity, and the credit risk associated with each rating category.

The Risk Premium approach recognizes the required compensation for the more risky common

1 equity over the less risky secured debt position of a lender. The cost of equity stated in terms of the
2 familiar risk premium approach is:

$$k = i + RP$$

3 where, the cost of equity (" k ") is equal to the interest rate on long-term corporate debt (" i "), plus an
4 equity risk premium (" RP ") which represents the additional compensation for the riskier common equity.

5 **Equity Risk Premium**

6 The equity risk premium is determined as the difference in the rate of return on debt capital and the
7 rate of return on common equity. Because the common equity holder has only a residual claim on earnings
8 and assets, there is no assurance that achieved returns on common equities will equal expected returns.
9 This is quite different from returns on bonds, where the investor realizes the expected return during the
10 entire holding period, absent default. It is for this reason that common equities are always more risky than
11 senior debt securities. There are investment strategies available to bond portfolio managers that immunize
12 bond returns against fluctuations in interest rates because bonds are redeemed through sinking funds or at
13 maturity, whereas no such redemption is mandated for public utility common equities.

14 It is well recognized that the expected return on more risky investments will exceed the required
15 yield on less risky investments. Neither the possibility of default on a bond nor the maturity risk detracts
16 from the risk analysis, because the common equity risk rate differential (i.e., the investor-required risk
17 premium) is always greater than the return components on a bond. It should also be noted that the
18 investment horizon is typically long-run for both corporate debt and equity, and that the risk of default (i.e.,
19 corporate bankruptcy) is a concern to both debt and equity investors. Thus, the required yield on a bond
20 provides a benchmark or starting point with which to track and measure the cost rate of common equity

1 capital. There is no need to segment the bond yield according to its components, because it is the total
2 return demanded by investors that is important for determining the risk rate differential for common equity.

3 This is because the complete bond yield provides the basis to determine the differential, and as such,
4 consistency requires that the computed differential must be applied to the complete bond yield when
5 applying the risk premium approach. To apply the risk rate differential to a partial bond yield would result
6 in a misspecification of the cost of equity because the computed differential was initially determined by
7 reference to the entire bond return.

8 The risk rate differential between the cost of equity and the yield on long-term corporate bonds
9 can be determined by reference to a comparison of holding period returns (here defined as one year)
10 computed over long time spans. This analysis assumes that over long periods of time investors'
11 expectations are on average consistent with rates of return actually achieved. Accordingly, historical
12 holding period returns must not be analyzed over an unduly short period because near-term realized results
13 may not have fulfilled investors' expectations. Moreover, specific past period results may not be
14 representative of investment fundamentals expected for the future. This is especially apparent when the
15 holding period returns include negative returns which are not representative of either investor requirements
16 of the past or investor expectations for the future. The short-run phenomenon of unexpected returns
17 (either positive or negative) demonstrates that an unduly short historical period would not adequately
18 support a risk premium analysis. It is important to distinguish between investors' motivation to invest,
19 which encompass positive return expectations, and the knowledge that losses can occur. No rational
20 investor would forego payment for the use of capital, or expect loss of principal, as a basis for investing.
21 Investors will hold cash rather than invest with the expectation of a loss.

1 Within these constraints, page 1 of Schedule 10 of IAWC Exhibit 8.0 provides the historical
2 holding period returns for the S&P Public Utility Index which have been independently computed and the
3 historical holding period returns for the S&P Composite Index which have been reported in Stocks,
4 Bonds, Bills and Inflation published by Ibbotson & Associates. The tabulation begins with 1928 because
5 January 1928 is the earliest monthly dividend yield for the S&P Public Utility Index. I have considered all
6 reliable data for this study to avoid the introduction of a particular bias to the results. The measurement of
7 the common equity return rate differential is based upon actual capital market performance using realized
8 results. As a consequence, the underlying data for this risk premium approach can be analyzed with a high
9 degree of precision. Informed professional judgment is required only to interpret the results of this study,
10 but not to quantify the component variables.

11 The risk rate differentials for all equities, as measured by the S&P Composite, are established by
12 reference to long-term corporate bonds. For public utilities, the risk rate differentials are computed with
13 the S&P Public Utilities as compared with public utility bonds.

14 The measurement procedure used to identify the risk rate differentials consisted of arithmetic
15 means, geometric means, and medians for each series. Measures of central tendency of the results from
16 the historical periods provide the best indication of representative rates of return. In regulated ratesetting,
17 the correct measure of the equity risk premium is the arithmetic mean because a utility must expect to earn
18 its cost of capital in each year in order to provide investors with their long-term expectations. In other
19 contexts, such as pension determinations, compound rates of return, as shown by the geometric means,
20 may be appropriate. The median returns are also appropriate in ratesetting because they are a measure of
21 the central tendency of a single period rate of return. Median values have also been considered in this

analysis because they provide a return which divides the entire series of annual returns in half and are representative of a return that symbolizes, in a meaningful way, the central tendency of all annual returns contained within the analysis period. Medians are regularly included in many investor-influencing publications.

As previously noted, the arithmetic mean provides the appropriate point estimate of the risk premium. As further explained in IAWC Exhibit 7.8, the long-term cost of capital in rate cases requires the use of the arithmetic means. To supplement my analysis, I have also used the rates of return taken from the geometric mean and median for each series to provide the bounds of the range to measure the risk rate differentials. This further analysis shows that when selecting the midpoint from a range established with the geometric means and medians, the arithmetic mean is indeed a reasonable measure for the long-term cost of capital. For the years 1928 through 2001, the risk premiums for each class of equity are:

| | <u>S&P Composite</u> | <u>S&P Public Utilities</u> |
|-------------------|------------------------------|-------------------------------------|
| Arithmetic Mean | <u>6.27%</u> | <u>5.32%</u> |
| Geometric Mean | 4.65% | 3.28% |
| Median | <u>11.37%</u> | <u>6.71%</u> |
| Midpoint of Range | <u>8.01%</u> | <u>5.00%</u> |
| Average | <u>7.14%</u> | <u>5.16%</u> |

The empirical evidence suggests that the common equity risk premium is higher for the S&P Composite Index compared to the S&P Public Utilities.

If, however, specific historical periods were also analyzed in order to match more closely historical fundamentals with current expectations, the results provided on page 2 of Schedule 10 of IAWC Exhibit

1 8.0 should also be considered. One of these sub-periods included the 50-year period, 1952-2001.
2 These years follow the historic 1951 Treasury-Federal Reserve Accord which affected monetary policy
3 and the market for government securities.

4 A further investigation was undertaken to determine whether realignment has taken place
5 subsequent to the historic 1973 Arab Oil embargo and during the deregulation of the financial markets. In
6 each case, the public utility risk premiums were computed by using the arithmetic mean, and the geometric
7 means and medians to establish the range shown by those values. The time periods covering the more
8 recent periods 1974 through 2001 and 1979 through 2001 contain events subsequent to the initial oil
9 shock and the advent of monetarism as Fed policy, respectively. For the 50-year, 28-year and 23-year
10 periods, the public utility risk premiums were 5.96%, 5.24%, and 5.39% respectively, as shown by the
11 average of the specific point-estimates and the midpoint of the ranges provided on page 2 of Schedule 10
12 of IAWC Exhibit 8.0.

CAPITAL ASSET PRICING MODEL

Modern portfolio theory provides a theoretical explanation of expected returns on portfolios of securities. The Capital Asset Pricing Model ("CAPM") attempts to describe the way prices of individual securities are determined in efficient markets where information is freely available and is reflected instantaneously in security prices. The CAPM states that the expected rate of return on a security is determined by a risk-free rate of return plus a risk premium which is proportional to the non-diversifiable (or systematic) risk of a security.

The CAPM theory has several unique assumptions that are not common to most other methods used to measure the cost of equity. As with other market-based approaches, the CAPM is an expectational concept. There has been significant academic research conducted that found that the empirical market line, based upon historical data, has a less steep slope and higher intercept than the theoretical market line of the CAPM. For equities with a beta less than 1.0, such as utility common stocks, the CAPM theoretical market line will underestimate the realistic expectation of investors in comparison with the empirical market line which shows that the CAPM may potentially misspecify investors' required return.

The CAPM considers changing market fundamentals in a portfolio context. The balance of the investment risk, or that characterized as unsystematic, must be diversified. Some argue that diversifiable (unsystematic) risk is unimportant to investors. But this contention is not completely justified because the business and financial risk of an individual company, including regulatory risk, are widely discussed within the investment community and therefore influence investors in regulated firms. In addition, I note that the CAPM assumes that through portfolio diversification, investors will minimize the effect of the unsystematic

1 (diversifiable) component of investment risk. Because it is not known whether the average investor holds
2 a well diversified portfolio, the CAPM must also be used with other models of the cost of equity.

3 To apply the traditional CAPM theory, three inputs are required: the beta coefficient (" β "), a risk-
4 free rate of return (" R_f "), and a market premium (" $R_m - R_f$ "). The cost of equity stated in terms of the
5 CAPM is:

6
$$k = R_f + \beta (R_m - R_f)$$

7 As previously indicated, it is important to recognize that the academic research has shown that the
8 security market line was flatter than that predicted by the CAPM theory and it had a higher intercept than
9 the risk-free rate. These tests indicated that for portfolios with betas less than 1.0, the traditional CAPM
10 would understate the return for such stocks. Likewise, for portfolios with betas above 1.0, these
11 companies had lower returns than indicated by the traditional CAPM theory. Once again, CAPM
12 assumes that through portfolio diversification investors will minimize the effect of the unsystematic
13 (diversifiable) component of investment risk. Therefore, the CAPM must also be used with other models
14 of the cost of equity, especially when it is not known whether the average public utility investor holds a
15 well-diversified portfolio.

16 **Beta**

17 The beta coefficient is a statistical measure which attempts to identify the non-diversifiable
18 (systematic) risk of an individual security and measures the sensitivity of rates of return on a particular
19 security with general market movements. Under the CAPM theory, a security that has a beta of 1.0
20 should theoretically provide a rate of return equal to the return rate provided by the market. When
21 employing stock price changes in the derivation of beta, a stock with a beta of 1.0 should exhibit a

1 movement in price which would track the movements in the overall market prices of stocks. Hence, if a
2 particular investment has a beta of 1.0, a one percent increase in the return on the market will result, on
3 average, in a one percent increase in the return on the particular investment. An investment which has a
4 beta less than 1.0 is considered to be less risky than the market.

5 The beta coefficient (" β "), the one input in the CAPM application which specifically applies to an
6 individual firm, is derived from a statistical application which regresses the returns on an individual security
7 (dependent variable) with the returns on the market as a whole (independent variable). The beta
8 coefficients for utility companies typically describe a small proportion of the total investment risk because
9 the coefficients of determination (R^2) are low.

10 Page 1 of Schedule 11 of IAWC Exhibit 8.0 provides the betas published by Value Line. By way
11 of explanation, the Value Line beta coefficient is derived from a "straight regression" based upon the
12 percentage change in the weekly price of common stock and the percentage change weekly of the New
13 York Stock Exchange Composite average using a five-year period. The raw historical beta is adjusted by
14 Value Line for the measurement effect resulting in overestimates in high beta stocks and underestimates in
15 low beta stocks. Value Line then rounds its betas to the nearest .05 increment. Value Line does not
16 consider dividends in the computation of its betas.

17 **Market Premium**

18
19 The final element necessary to apply the CAPM is the market premium. The market premium by
20 definition is the rate of return on the total market less the risk-free rate of return (" $R_m - R_f$ "). In this
21 regard, the market premium in the CAPM has been calculated from the total return on the market of
22 equities using forecast and historical data. The future market return is established with forecasts by Value

1 Line using estimated dividend yields and capital appreciation potential.

2 With regard to the forecast data, I have relied upon the Value Line forecasts of capital
3 appreciation and the dividend yield on the 1,700 stocks in the Value Line Survey. According to the July
4 5, 2002, edition of The Value Line Investment Survey Summary and Index, (see page 5 of Schedule 11 of
5 IAWC Exhibit 8.0) the total return on the universe of Value Line equities is:

| | Dividend | | Median | | Median |
|--------------------|----------|---|---------------------|---|--------|
| | Yield | + | Appreciation | = | Total |
| | | | Potential | | Return |
| As of July 5, 2002 | 1.8% | + | 14.19% ¹ | = | 15.99% |

11
12 The tabulation shown above provides the dividend yield and capital gains yield of the companies followed
13 by Value Line. With the 15.99% forecast market return and the 5.50% risk-free rate of return, a 10.49%
14 (15.99% - 5.50%) market premium would be indicated using forecast market data.

15 With regard to the historical data, I provided the rates of return from long-term historical time
16 periods that have been widely circulated among the investment and academic community over the past
17 several years, as shown on page 6 of Schedule 11 of IAWC Exhibit 8.0. These data are published by
18 Ibbotson Associates in its Stocks, Bonds, Bills and Inflation ("SBBI"). From the data provided on page 6
19 of Schedule 11 of IAWC Exhibit 8.0, I calculate a market premium using the common stock arithmetic
20 mean returns of 12.7% less government bond arithmetic mean returns of 5.7%. For the period 1926-
21 2001, the market premium was 7.0% (12.7% - 5.7%). I should note that the arithmetic mean must be
22 used in the CAPM because it is a single period model. It is further confirmed by Ibbotson who has
23 indicated:

24
25

¹ The estimated median appreciation potential is forecast to be 70% for 3 to 5 years hence. The annual capital gains yield at the midpoint of the forecast period is 14.19% (i.e., $1.70^{25} - 1$).

Arithmetic Versus Geometric Differences

For use as the expected equity risk premium in the CAPM, the *arithmetic* or *simple difference* of the *arithmetic* means of stock market returns and riskless rates is the relevant number. This is because the CAPM is an additive model where the cost of capital is the sum of its parts. Therefore, the CAPM expected equity risk premium must be derived by arithmetic, *not geometric*, subtraction.

Arithmetic Versus Geometric Means

The expected equity risk premium should always be calculated using the arithmetic mean. The arithmetic mean is the rate of return which, when compounded over multiple periods, gives the mean of the probability distribution of ending wealth values. This makes the arithmetic mean return appropriate for computing the cost of capital. The discount rate that equates expected (mean) future values with the present value of an investment is that investment's cost of capital. The logic of using the discount rate as the cost of capital is reinforced by noting that investors will discount their (mean) ending wealth values from an investment back to the present using the arithmetic mean, for the reason given above. They will therefore require such an expected (mean) return prospectively (that is, in the present looking toward the future) to commit their capital to the investment. (Stocks, Bonds, Bills and Inflation - 1996 Yearbook, pages 153-154)

For the CAPM, a market premium of 8.75% ($7.0\% + 10.49\% = 17.49\% \div 2$) would be reasonable which is the average of the 7.0% using historical data and a market premium of 10.49% using forecasts.

COMPARABLE EARNINGS APPROACH

In order to identify the appropriate return on equity for a public utility, it is necessary to analyze returns experienced by other firms within the context of the Comparable Earnings standard. Returns for utility companies have not been used for this purpose so as to avoid the circularity that arises from using regulatory influenced returns to determine a regulated return. As such, the firms selected for the Comparable Earnings approach should be companies whose prices are not subject to cost-based price ceilings (i.e., non-regulated firms) so that circularity is avoided. Because regulated firms must compete with non-regulated firms in the capital markets, it is appropriate, if not necessary, to view the returns experienced by firms which operate in competitive markets. One must keep in mind that the rates of return for non-regulated firms represent results on book value actually achieved or expected to be achieved because the starting point of the calculation is the actual experience of companies that are not subject to rate regulation. Hence, the results of the Comparable Earnings method can be applied directly to an original cost rate base because the nature of the analysis relates to book value. As such, the Comparable Earnings approach is not susceptible to the potential misspecification associated with market models when prices and book values diverge significantly.

As established in the Hope case:

[T]he return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital.

Therefore, it is important to identify the returns earned by firms which compete for capital with public utilities. This can be accomplished by analyzing the returns for non-regulated firms which are subject to the competitive forces of the marketplace.

26 There are two avenues available to implement the Comparable Earnings approach. One method
27 would involve the selection of another industry (or industries) with comparable risks to the public utility in
28 question, and the results for all companies within that industry would serve as a benchmark. The second
29 approach requires the selection of parameters which represent similar risk traits for the public utility and
30 the comparable risk companies. Using this approach, the business lines of the comparable companies
31 become unimportant. The latter approach is preferable with the further qualification that the comparable
32 risk companies exclude regulated firms. As such, this approach to Comparable Earnings avoids the
33 circular reasoning implicit in the use of the achieved earnings/book ratios of other regulated firms. Rather,
34 it provides an indication of an earnings rate derived from non-regulated companies which are subject to
35 competition in the marketplace and not rate regulation. Because regulation is a substitute for competitively
36 determined prices, the returns realized by non-regulated firms with comparable risks to a public utility
37 provide useful insight into a fair rate of return. This is because returns realized by non-regulated firms have
38 become increasingly relevant with the trend toward increased risk throughout the public utility business.
39 Moreover, the rate of return for a regulated public utility must be competitive with returns available on
40 investments in other enterprises having corresponding risks, especially in a more global economy.

41 To identify the comparable risk companies, the Value Line Investment Survey for Windows was
42 used to screen for firms of comparable risks. The Value Line Investment Survey for Windows includes
43 data on approximately 1600 firms. Excluded from the selection process were companies with a foreign
44 exchange listing and master limited partnerships (MLPs).

45 Value Line's risk analysis of these firms includes a wide range of financial and market variables,
46 including nine items that provide ratings for each company. From these nine items, I removed one
47 category dealing with industry performance because, under my approach, the particular business type is

not significant. In addition, I removed two categories dealing with estimates of current earnings and dividends because they are not useful for comparative purposes. The remaining six categories provide relevant measures to establish comparability. The definitions for each of the six criteria (from the Value Line Investment Survey - Subscriber Guide) follows:

Timeliness Rank

The rank for a stock's probable relative market performance in the year ahead. Stocks ranked 1 (Highest) or 2 (Above Average) are likely to outpace the year-ahead market. Those ranked 4 (Below Average) or 5 (Lowest) are not expected to outperform most stocks over the next 12 months. Stocks ranked 3 (Average) will probably advance or decline with the market in the year ahead. Investors should try to limit purchases to stocks ranked 1 (Highest) or 2 (Above Average) for Timeliness.

Safety Rank

A measure of potential risk associated with individual common stocks rather than large diversified portfolios (for which Beta is good risk measure). Safety is based on the stability of price, which includes sensitivity to the market (see Beta) as well as the stock's inherent volatility, adjusted for trend and other factors including company size, the penetration of its markets, product market volatility, the degree of financial leverage, the earnings quality, and the overall condition of the balance sheet. Safety Ranks range from 1 (Highest) to 5 (Lowest). Conservative investors should try to limit purchases to equities ranked 1 (Highest) or 2 (Above Average) for Safety.

Financial Strength

The financial strength of each of the more than 1,600 companies in the VS II database is rated relative to all the others. The ratings range from A++ to C in nine steps. (For screening purposes, think of an A rating as "greater than" a B). Companies that have the best relative financial strength are given an A++ rating, indicating ability to weather hard times better than the vast majority of other companies. Those who don't quite merit the top rating are given an A+ grade, and so on. A rating as low as C++ is considered satisfactory. A rating of C+ is well below average, and C is reserved for companies with very serious financial problems. The ratings are based upon a computer analysis of a number of key variables that determine (a) financial leverage, (b) business risk, and (c)

company size, plus the judgment of Value Line's analysts and senior editors regarding factors that cannot be quantified across-the-board for companies. The primary variables that are indexed and studied include equity coverage of debt, equity coverage of intangibles, "quick ratio", accounting methods, variability of return, fixed charge coverage, stock price stability, and company size.

Price Stability Index

An index based upon a ranking of the weekly percent changes in the price of the stock over the last five years. The lower the standard deviation of the changes, the more stable the stock. Stocks ranking in the top 5% (lowest standard deviations) carry a Price Stability Index of 100; the next 5%, 95; and so on down to 5. One standard deviation is the range around the average weekly percent change in the price that encompasses about two thirds of all the weekly percent change figures over the last five years. When the range is wide, the standard deviation is high and the stock's Price Stability Index is low.

Beta

A measure of the sensitivity of the stock's price to overall fluctuations in the New York Stock Exchange Composite Average. A Beta of 1.50 indicates that a stock tends to rise (or fall) 50% more than the New York Stock Exchange Composite Average. Use Beta to measure the stock market risk inherent in any diversified portfolio of, say, 15 or more companies. Otherwise, use the Safety Rank, which measures total risk inherent in an equity, including that portion attributable to market fluctuations. Beta is derived from a least squares regression analysis between weekly percent changes in the price of a stock and weekly percent changes in the NYSE Average over a period of five years. In the case of shorter price histories, a smaller time period is used, but two years is the minimum. The Betas are periodically adjusted for their long-term tendency to regress toward 1.00.

Technical Rank

A prediction of relative price movement, primarily over the next three to six months. It is a function of price action relative to all stocks followed by Value Line. Stocks ranked 1 (Highest) or 2 (Above Average) are likely to outpace the market. Those ranked 4 (Below Average) or 5 (Lowest) are not expected to outperform most stocks over the next six months. Stocks ranked 3 (Average) will probably advance or decline with the market. Investors should use the Technical and Timeliness Ranks as complements to one another.

In order to implement the Comparable Earnings approach, non-regulated companies were selected from the Value Line Investment Survey for Windows which have six categories of comparability designed to reflect the risk of the Water Group and Gas Distribution Group. These screening criteria were used to establish a range as defined by the rankings of the component companies in the Water Group and Gas Distribution Group. The items considered were: Timeliness Rank, Safety Ranking, Financial Strength, Price Stability, Value Line betas, and Technical Rank. The identities of companies comprising the Comparable Earnings group and their associated rankings within the ranges are identified on page 1 of Schedule 12 of IAWC Exhibit 8.0 for the Water Group and Gas Distribution Group.

Both historical realized returns and forecast returns for non-utility companies have been used in the Comparable Earnings approach. It is appropriate to consider a relatively long measurement period in the Comparable Earnings approach in order to cover conditions over an entire business cycle. A ten-year period (5 historical years and 5 projected years) is sufficient¹ to cover an average business cycle. The historical rate of return on book common equity was 21.1% using the average measure of central tendency and 16.4% using the median value as shown on page 2 of Schedule 12 of IAWC Exhibit 8.0. The forecast rates of return as published by Value Line are shown by the 17.6% average and 14.8% median

values also provided on page 2 of Schedule 12 of IAWC Exhibit 8.0. Value Line data was relied upon because it provides a comprehensive basis for evaluating the risks of the comparable firms.

The average of the historical and forecast median rates of return is 15.60% ($16.4\% + 14.8\% = 31.2\% \div 2$) and represents the Comparable Earnings result for this case. As to the returns calculated by Value Line for these companies, there is some downward bias in the figures shown on page 2 of Schedule 12 of IAWC Exhibit 8.0 because Value Line computes the returns on year-end rather than average book value. If average book values had been employed, the rates of return would have been slightly higher. Nevertheless, these are the returns considered by investors when taking positions in these stocks. Finally, because many of the comparability factors, as well as the published returns, are used by investors for selecting stocks, and to the extent that investors rely on the Value Line service to gauge their returns, it is, therefore, an appropriate database for measuring comparable return opportunities.

¹ For example, since 1854, there have been 30 business cycles having an average length of 51 months measured from trough to trough and 53 months measured from peak to peak. Hence, a 10-year measurement period in the Comparable Earnings approach is more than adequate to cover an average business cycle.

ILLINOIS-AMERICAN WATER COMPANY

Financial Exhibit

to Accompany

the Direct Testimony

of

Paul R. Moul, Managing Consultant
P. Moul & Associates

ILLINOIS-AMERICAN WATER COMPANY
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Illinois-American Water Company

**Overall Rate of Return
For the Rate Year 2003**

| <u>Type of Capital</u> | <u>Ratios</u> | <u>Cost Rate</u> | <u>Weighted Cost Rate</u> |
|------------------------|----------------|----------------------|-----------------------------------|
| Long-Term Debt | 54.85% | 5.537% | 3.04% |
| Common Equity | <u>45.15%</u> | 11.015% | <u>4.97%</u> |
| Total | <u>100.00%</u> | | <u>8.01%</u> |

Indicated levels of fixed charge coverage assuming that
the Company could actually achieve its overall cost of capital:

Pre-tax coverage of interest expense based upon a
37.5805% composite federal and state income tax rate
(11.00% ÷ 3.04%) 3.62 x

Post-tax coverage of interest expense
(8.01% ÷ 3.04%) 2.63 x

Illinois-American Water Company
Capitalization and Financial Statistics
1997-2001, Inclusive

| | <u>2001</u> | <u>2000</u> | <u>1999</u> | <u>1998</u> | <u>1997</u> | |
|---|-----------------------|-----------------|-----------------|-----------------|-----------------|----------------|
| | (Millions of Dollars) | | | | | |
| Amount of Capital Employed | | | | | | |
| Permanent Capital | \$ 280.7 | \$ 284.1 | \$ 286.0 | \$ 188.9 | \$ 153.2 | |
| Short-Term Debt | \$ 40.5 | \$ 20.8 | \$ 2.6 | \$ 1.1 | \$ 21.0 | |
| Total Capital | <u>\$ 321.1</u> | <u>\$ 304.9</u> | <u>\$ 288.5</u> | <u>\$ 190.0</u> | <u>\$ 174.1</u> | |
| Capital Structure Ratios | | | | | | |
| Based on Permanent Capital: | | | | | | <u>Average</u> |
| Long-Term Debt | 50.7% | 52.2% | 53.9% | 48.0% | 51.0% | 51.2% |
| Preferred Stock | 0.2% | 0.2% | 0.3% | 0.4% | 0.6% | 0.3% |
| Common Equity | 49.1% | 47.6% | 45.8% | 51.6% | 48.4% | 48.5% |
| | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> |
| Based on Total Capital: | | | | | | |
| Total Debt incl. Short Term | 56.9% | 55.4% | 54.3% | 48.3% | 56.9% | 54.4% |
| Preferred Stock | 0.2% | 0.2% | 0.3% | 0.4% | 0.5% | 0.3% |
| Common Equity | 42.9% | 44.4% | 45.4% | 51.3% | 42.5% | 45.3% |
| | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> | <u>99.9%</u> | <u>100.0%</u> |
| Rate of Return on Book Common Equity | 10.1% | 12.6% | 11.9% | 14.5% | 13.2% | 12.5% |
| Operating Ratio (1) | 69.4% | 63.9% | 70.1% | 64.9% | 68.9% | 67.4% |
| Coverage incl. AFUDC (2) | | | | | | |
| Pre-tax: All Interest Charges | 2.96 x | 3.61 x | 3.26 x | 4.03 x | 3.45 x | 3.46 x |
| Post-tax: All Interest Charges | 2.28 x | 2.59 x | 2.43 x | 2.92 x | 2.56 x | 2.56 x |
| Overall Coverage: All Int. & Pfd. Div. | 2.28 x | 2.58 x | 2.42 x | 2.90 x | 2.54 x | 2.54 x |
| Coverage excl. AFUDC (3) | | | | | | |
| Pre-tax: All Interest Charges | 2.93 x | 3.30 x | 3.11 x | 3.99 x | 3.27 x | 3.32 x |
| Post-tax: All Interest Charges | 2.25 x | 2.29 x | 2.28 x | 2.88 x | 2.38 x | 2.42 x |
| Overall Coverage: All Int. & Pfd. Div. | 2.25 x | 2.28 x | 2.26 x | 2.86 x | 2.36 x | 2.40 x |
| Quality of Earnings & Cash Flow | | | | | | |
| AFC/Income Avail. for Common Equity | 2.3% | 19.4% | 10.9% | 2.0% | 11.4% | 9.2% |
| Effective Income Tax Rate | 34.5% | 38.8% | 36.8% | 36.5% | 36.2% | 36.6% |
| Internal Cash Generation/Construction (4) | 58.9% | 36.5% | 47.3% | 54.4% | 37.8% | 47.0% |
| Gross Cash Flow/ Avg. Total Debt(5) | 14.7% | 16.9% | 21.6% | 24.0% | 21.4% | 19.7% |
| Gross Cash Flow Interest Coverage(6) | 3.34 x | 3.44 x | 3.69 x | 4.49 x | 3.96 x | 3.78 x |
| Common Dividend Coverage (7) | 2.30 x | 2.16 x | 2.78 x | 2.51 x | 2.69 x | 2.49 x |

See Page 2 for Notes.

Illinois-American Water Company
Capitalization and Financial Statistics
1997-2001, Inclusive

Notes:

- (1) Total operating expenses, maintenance, depreciation and taxes other than income as a percentage of operating revenues.
- (2) Coverage calculations represent the number of times available earnings including AFUDC (allowance for funds used during construction), as reported in its entirety, cover fixed charges.
- (3) Coverage calculations represent the number of times available earnings excluding AFUDC (allowance for funds used during construction), as reported in its entirety, cover fixed charges.
- (4) Internal cash generation/gross construction is the percentage of gross construction expenditures provided by internally generated funds from operations after payment of all cash dividends.
- (5) Gross Cash Flow (sum of net income, depreciation, amortization, net deferred income taxes and investment tax credits, less AFUDC) as a percentage of average total debt.
- (6) Gross Cash Flow plus interest charges divided by interest charges.
- (7) Common dividend coverage is the relationship of internally generated funds from operations after payment of preferred stock dividends to common dividends paid.

Source of Information: Company's Annual Reports

Water Group
Capitalization and Financial Statistics (1)
1997-2001, Inclusive

| | 2001 | 2000 | 1999 | 1998 | 1997 | |
|---|-----------------|-----------------|-----------------------|-----------------|-----------------|----------------|
| | | | (Millions of Dollars) | | | |
| Amount of Capital Employed | | | | | | |
| Permanent Capital | \$ 404.0 | \$ 367.2 | \$ 330.5 | \$ 265.2 | \$ 239.7 | |
| Short-Term Debt | \$ 29.7 | \$ 27.8 | \$ 24.2 | \$ 11.5 | \$ 10.0 | |
| Total Capital | <u>\$ 433.7</u> | <u>\$ 395.0</u> | <u>\$ 354.7</u> | <u>\$ 276.7</u> | <u>\$ 249.7</u> | |
| Market-Based Financial Ratios | | | | | | <u>Average</u> |
| Earnings/Price Ratio | 4.6% | 4.7% | 5.2% | 6.2% | 7.1% | 5.6% |
| Market/Book Ratio | 230.0% | 215.2% | 215.9% | 195.4% | 171.7% | 205.6% |
| Dividend Yield | 3.4% | 3.6% | 3.6% | 4.2% | 4.9% | 3.9% |
| Dividend Payout Ratio | 76.4% | 78.8% | 68.7% | 69.8% | 69.4% | 72.6% |
| Capital Structure Ratios | | | | | | |
| Based on Permanent Capital: | | | | | | |
| Long-Term Debt | 50.5% | 48.2% | 48.9% | 47.3% | 46.0% | 48.2% |
| Preferred Stock | 0.8% | 0.9% | 0.9% | 1.1% | 1.5% | 1.0% |
| Common Equity | <u>48.8%</u> | <u>50.9%</u> | <u>50.2%</u> | <u>51.7%</u> | <u>52.5%</u> | <u>50.8%</u> |
| | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> |
| Based on Total Capital: | | | | | | |
| Total Debt incl. Short Term | 53.1% | 51.0% | 51.0% | 49.3% | 48.1% | 50.5% |
| Preferred Stock | 0.7% | 0.8% | 0.9% | 1.0% | 1.5% | 1.0% |
| Common Equity | <u>46.2%</u> | <u>48.2%</u> | <u>48.1%</u> | <u>49.7%</u> | <u>50.5%</u> | <u>48.5%</u> |
| | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> |
| Rate of Return on Book Common Equity | 10.4% | 10.2% | 11.4% | 11.4% | 12.0% | 11.1% |
| Operating Ratio (2) | 72.5% | 72.0% | 71.2% | 69.6% | 69.5% | 71.0% |
| Coverage incl. AFUDC (3) | | | | | | |
| Pre-tax: All Interest Charges | 3.31 x | 3.23 x | 3.59 x | 3.70 x | 3.86 x | 3.54 x |
| Post-tax: All Interest Charges | 2.47 x | 2.37 x | 2.57 x | 2.67 x | 2.75 x | 2.57 x |
| Overall Coverage: All Int. & Pfd. Div. | 2.44 x | 2.35 x | 2.53 x | 2.63 x | 2.70 x | 2.53 x |
| Coverage excl. AFUDC (3) | | | | | | |
| Pre-tax: All Interest Charges | 3.26 x | 3.18 x | 3.50 x | 3.62 x | 3.81 x | 3.47 x |
| Post-tax: All Interest Charges | 2.42 x | 2.32 x | 2.48 x | 2.59 x | 2.70 x | 2.50 x |
| Overall Coverage: All Int. & Pfd. Div. | 2.39 x | 2.29 x | 2.44 x | 2.55 x | 2.65 x | 2.47 x |
| Quality of Earnings & Cash Flow | | | | | | |
| AFC/Income Avail. for Common Equity | 3.3% | 3.6% | 5.6% | 5.0% | 2.8% | 4.1% |
| Effective Income Tax Rate | 36.8% | 38.1% | 39.3% | 37.6% | 38.8% | 38.1% |
| Internal Cash Generation/Construction (4) | 51.2% | 50.5% | 49.8% | 52.9% | 61.5% | 53.2% |
| Gross Cash Flow/ Avg. Total Debt(5) | 18.9% | 18.0% | 20.5% | 21.8% | 22.1% | 20.3% |
| Gross Cash Flow Interest Coverage(6) | 3.80 x | 3.52 x | 3.69 x | 3.87 x | 3.94 x | 3.76 x |
| Common Dividend Coverage (7) | 2.77 x | 2.51 x | 2.67 x | 2.67 x | 2.57 x | 2.64 x |

See Page 2 for Notes.

Water Group
Capitalization and Financial Statistics
1997-2001, Inclusive

Notes:

- (1) All capitalization and financial statistics for the group are the arithmetic average of the achieved results for each individual company in the group.
- (2) Total operating expenses, maintenance, depreciation and taxes other than income as a percentage of operating revenues.
- (3) Coverage calculations represent the number of times available earnings, both including and excluding AFUDC (allowance for funds used during construction) as reported in its entirety, cover fixed charges.
- (4) Internal cash generation/gross construction is the percentage of gross construction expenditures provided by internally-generated funds from operations after payment of all cash dividends.
- (5) Gross Cash Flow (sum of net income, depreciation, amortization, net deferred income tax and investment tax credits, less total AFUDC) as a percentage of average total debt.
- (6) Gross Cash Flow plus interest charges divided by interest charges.
- (7) Common dividend coverage is the relationship of internally-generated funds from operations after payment of preferred stock dividends to common dividends paid.

Basis of Selection

The group contains all of the water companies listed in "Water Utility Industry" category of The Value Line Investment Survey basic and expanded editions, that are not now involved in a pending acquisition by another company, and they have not previously reduced their common dividend.

| <u>Company</u> | <u>Corporate Credit Rating (1)</u> | | <u>Business Profile (1)</u> | <u>Common Stock Traded</u> | <u>S&P Common Stock Ranking</u> | <u>Value Line Beta</u> |
|----------------------------------|------------------------------------|----------------|-----------------------------|----------------------------|-------------------------------------|------------------------|
| | <u>Moody's</u> | <u>S&P</u> | | | | |
| American States Water Co. | A2 | A+ | 3 | NYSE | B+ | .65 |
| California Water Service Group | Aa3 | AA- | 3 | NYSE | B+ | .60 |
| Connecticut Water Services, Inc. | - | - | - | NASDAQ | A- | .45 |
| Middlesex Water Company | A2 | A | 3 | NASDAQ | | .45 |
| Philadelphia Suburban Corp. | - | A+ | 2 | NYSE | A- | .60 |
| SJW Corp. | <u>-</u> | <u>-</u> | <u>-</u> | AMEX | <u>B+</u> | <u>.55</u> |
| | <u>A1</u> | <u>A+</u> | <u>3</u> | | <u>B+</u> | <u>.55</u> |

Notes: (1) Ratings/Profiles are those of utility subsidiaries

Source of Information: Utility COMPUSTAT
Company Annual Reports to stockholders
Moody's Investors Service
S&P Stock Guide

Gas Distribution Group
Capitalization and Financial Statistics (1)
1997-2001, Inclusive

| | <u>2001</u> | <u>2000</u> | <u>1999</u> | <u>1998</u> | <u>1997</u> | |
|---|-------------------|-------------------|-----------------------|-------------------|-------------------|----------------|
| | | | (Millions of Dollars) | | | |
| Amount of Capital Employed | | | | | | |
| Permanent Capital | \$ 1,150.3 | \$ 918.8 | \$ 964.1 | \$ 964.4 | \$ 911.7 | |
| Short-Term Debt | \$ 275.7 | \$ 346.8 | \$ 181.6 | \$ 102.1 | \$ 130.8 | |
| Total Capital | <u>\$ 1,426.0</u> | <u>\$ 1,265.6</u> | <u>\$ 1,145.7</u> | <u>\$ 1,066.5</u> | <u>\$ 1,042.5</u> | |
| Market-Based Financial Ratios | | | | | | <u>Average</u> |
| Earnings/Price Ratio | 7.2% | 5.4% | 5.7% | 6.3% | 6.4% | 6.2% |
| Market/Book Ratio | 185.0% | 175.3% | 192.8% | 213.5% | 209.1% | 195.1% |
| Dividend Yield | 5.1% | 5.5% | 4.9% | 4.5% | 4.6% | 4.9% |
| Dividend Payout Ratio | 72.8% | 111.1% | 104.8% | 71.7% | 75.3% | 87.1% |
| Capital Structure Ratios | | | | | | |
| Based on Permanent Capital: | | | | | | |
| Long-Term Debt | 47.6% | 42.3% | 43.1% | 44.9% | 44.2% | 44.4% |
| Preferred Stock | 0.2% | 0.2% | 0.2% | 0.2% | 0.3% | 0.2% |
| Common Equity | 52.2% | 57.5% | 56.7% | 54.8% | 55.6% | 55.4% |
| | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> |
| Based on Total Capital: | | | | | | |
| Total Debt incl. Short Term | 57.4% | 57.4% | 52.0% | 50.8% | 51.4% | 53.8% |
| Preferred Stock | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% |
| Common Equity | 42.5% | 42.4% | 47.8% | 49.0% | 48.4% | 46.0% |
| | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> |
| Rate of Return on Book Common Equity | 13.6% | 9.0% | 10.7% | 13.3% | 13.5% | 12.0% |
| Operating Ratio (2) | 91.8% | 90.9% | 88.4% | 86.8% | 88.8% | 89.3% |
| Coverage incl. AFUDC (3) | | | | | | |
| Pre-tax: All Interest Charges | 3.56 x | 2.65 x | 3.59 x | 3.87 x | 3.96 x | 3.53 x |
| Post-tax: All Interest Charges | 2.68 x | 2.11 x | 2.68 x | 2.85 x | 2.89 x | 2.64 x |
| Overall Coverage: All Int. & Pfd. Div. | 2.67 x | 2.11 x | 2.67 x | 2.84 x | 2.89 x | 2.63 x |
| Coverage excl. AFUDC (3) | | | | | | |
| Pre-tax: All Interest Charges | 3.54 x | 2.63 x | 3.56 x | 3.85 x | 3.95 x | 3.51 x |
| Post-tax: All Interest Charges | 2.66 x | 2.09 x | 2.64 x | 2.83 x | 2.89 x | 2.62 x |
| Overall Coverage: All Int. & Pfd. Div. | 2.65 x | 2.09 x | 2.63 x | 2.82 x | 2.88 x | 2.61 x |
| Quality of Earnings & Cash Flow | | | | | | |
| AFC/Income Avail. for Common Equity | 1.4% | 1.5% | 1.9% | 1.1% | 0.4% | 1.3% |
| Effective Income Tax Rate | 34.6% | 32.1% | 35.3% | 35.7% | 36.3% | 34.8% |
| Internal Cash Generation/Construction (4) | 82.3% | 79.4% | 85.2% | 95.2% | 105.1% | 89.4% |
| Gross Cash Flow/ Avg. Total Debt(5) | 22.7% | 22.1% | 27.5% | 27.7% | 27.4% | 25.5% |
| Gross Cash Flow Interest Coverage(6) | 4.42 x | 4.34 x | 5.23 x | 5.01 x | 4.53 x | 4.70 x |
| Common Dividend Coverage (7) | 3.07 x | 2.89 x | 3.15 x | 3.13 x | 2.86 x | 3.02 x |

See Page 2 for Notes.

Gas Distribution Group
Capitalization and Financial Statistics
1997-2001, Inclusive

Notes:

- (1) All capitalization and financial statistics for the group are the arithmetic average of the achieved results for each individual company in the group.
- (2) Total operating expenses, maintenance, depreciation and taxes other than income taxes as a percent of operating revenues.
- (3) Coverage calculations represent the number of times available earnings, both including and excluding AFUDC (allowance for funds used during construction) as reported in its entirety, cover fixed charges.
- (4) Internal cash generation/gross construction is the percentage of gross construction expenditures provided by internally-generated funds from operations after payment of all cash dividends divided by gross contribution expenditures.
- (5) Gross Cash Flow (sum of net income, depreciation, amortization, net deferred income taxes and investment tax credits, less total AFUDC) plus interest charges, divided by interest charges.
- (6) Gross Cash Flow plus interest charges divided by interest charges.
- (7) Common dividend coverage is the relationship of internally-generated funds from operations after payment of preferred stock dividends to common dividends paid.

Basis of Selection:

The Barometer Group of Nine Gas Distribution Companies includes companies reported in Edition 3 "Natural Gas Distribution Industry" of the basic service of The Value Line Investment Survey, that operate in the central region of the U.S., they have not cut or omitted their dividend, and they are not currently the target of a merger or acquisition.

| | Corporate <u>Credit Rating (1)</u> | | Common <u>Business</u> | S&P Common <u>Stock</u> | <u>Stock</u> | Value Line |
|-------------------------------|---------------------------------------|----------------|---------------------------|----------------------------|----------------|-------------|
| | <u>Moody's</u> | <u>S&P</u> | <u>Profile (1)</u> | <u>Traded</u> | <u>Ranking</u> | <u>Beta</u> |
| <u>Gas Distribution Group</u> | | | | | | |
| Atmos Energy Corporation | Baa1 | A- | 4 | NYSE | B+ | .55 |
| Laclede Group, Inc. | A2 | A+ | 3 | NYSE | B+ | .55 |
| NICOR, Inc. | Aa2 | AA | 2 | NYSE | B+ | .55 |
| Peoples Energy | <u>Aa2</u> | <u>AA-</u> | <u>3</u> | NYSE | <u>B+</u> | <u>.70</u> |
| Average | <u>A1</u> | <u>A+</u> | <u>3</u> | | <u>B+</u> | <u>.59</u> |

Notes: (1) Ratings/Profiles are those of utility subsidiaries.

Source of Information: Company Annual Reports to Stockholders
Utility COMPUSTAT
Moody's Investors Service
Standard & Poor's Corporation
S&P Stock Guide

Standard & Poor's Public Utilities
Capitalization and Financial Statistics (1)
1997-2001, Inclusive

| | <u>2001</u> | <u>2000</u> | <u>1999</u> | <u>1998</u> | <u>1997</u> | |
|---|--------------------|--------------------|-----------------------|-------------------|-------------------|----------------|
| | | | (Millions of Dollars) | | | |
| Amount of Capital Employed | | | | | | |
| Permanent Capital | \$ 14,321.2 | \$ 11,953.8 | \$ 10,029.1 | \$ 8,839.1 | \$ 7,922.4 | |
| Short-Term Debt | \$ 1,080.9 | \$ 1,514.1 | \$ 855.2 | \$ 575.1 | \$ 402.1 | |
| Total Capital | <u>\$ 15,402.1</u> | <u>\$ 13,467.9</u> | <u>\$ 10,884.3</u> | <u>\$ 9,414.2</u> | <u>\$ 8,324.5</u> | |
| Market-Based Financial Ratios | | | | | | <u>Average</u> |
| Earnings/Price Ratio | 8.0% | 4.5% | 7.0% | 5.7% | 6.6% | 6.4% |
| Market/Book Ratio | 207.9% | 220.9% | 197.5% | 203.6% | 186.5% | 203.3% |
| Dividend Yield | 3.5% | 4.2% | 4.4% | 4.1% | 4.7% | 4.2% |
| Dividend Payout Ratio | 67.8% | 77.3% | 64.6% | 69.2% | 70.2% | 69.8% |
| Capital Structure Ratios | | | | | | |
| Based on Permanent Capital: | | | | | | |
| Long-Term Debt | 58.9% | 57.3% | 56.4% | 54.0% | 52.2% | 55.8% |
| Preferred Stock | 3.8% | 3.7% | 3.7% | 3.5% | 3.8% | 3.7% |
| Common Equity | <u>37.3%</u> | <u>39.0%</u> | <u>39.9%</u> | <u>42.5%</u> | <u>44.1%</u> | <u>40.6%</u> |
| | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> |
| Based on Total Capital: | | | | | | |
| Total Debt incl. Short Term | 62.6% | 62.4% | 59.8% | 56.5% | 54.9% | 59.2% |
| Preferred Stock | 3.5% | 3.4% | 3.5% | 3.3% | 3.6% | 3.5% |
| Common Equity | <u>33.9%</u> | <u>34.2%</u> | <u>36.7%</u> | <u>40.1%</u> | <u>41.4%</u> | <u>37.3%</u> |
| | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> |
| Rate of Return on Book Common Equity | 14.4% | 9.2% | 12.5% | 10.9% | 11.5% | 11.7% |
| Operating Ratio (2) | 85.1% | 86.6% | 82.5% | 83.0% | 80.4% | 83.5% |
| Coverage incl. AFUDC (3) | | | | | | |
| Pre-tax: All Interest Charges | 2.96 x | 2.78 x | 3.07 x | 2.82 x | 3.12 x | 2.95 x |
| Post-tax: All Interest Charges | 2.29 x | 2.15 x | 2.36 x | 2.19 x | 2.35 x | 2.27 x |
| Overall Coverage: All Int. & Pfd. Div. | 2.21 x | 2.00 x | 2.28 x | 2.11 x | 2.24 x | 2.17 x |
| Coverage excl. AFUDC (3) | | | | | | |
| Pre-tax: All Interest Charges | 2.93 x | 2.75 x | 3.06 x | 2.80 x | 3.09 x | 2.93 x |
| Post-tax: All Interest Charges | 2.26 x | 2.13 x | 2.34 x | 2.17 x | 2.32 x | 2.24 x |
| Overall Coverage: All Int. & Pfd. Div. | 2.17 x | 1.98 x | 2.26 x | 2.09 x | 2.21 x | 2.14 x |
| Quality of Earnings & Cash Flow | | | | | | |
| AFUDC/Income Avail. for Common Equity | 1.7% | 4.7% | 1.5% | 1.8% | 2.2% | 2.4% |
| Effective Income Tax Rate | 30.7% | 35.0% | 34.7% | 36.5% | 36.4% | 34.7% |
| Internal Cash Generation/Construction (4) | 91.1% | 83.1% | 102.6% | 118.5% | 138.4% | 106.7% |
| Gross Cash Flow/ Avg. Total Debt(5) | 17.7% | 17.4% | 20.3% | 21.6% | 24.2% | 20.2% |
| Gross Cash Flow Interest Coverage(6) | 3.68 x | 3.75 x | 3.99 x | 3.88 x | 4.27 x | 3.91 x |
| Common Dividend Coverage (7) | 5.96 x | 4.24 x | 4.24 x | 4.25 x | 4.34 x | 4.61 x |

See Page 2 for Notes.

Standard & Poor's Public Utilities
Capitalization and Financial Statistics
1997-2001, Inclusive

Notes:

- (1) All capitalization and financial statistics for the group are the arithmetic average of the achieved results for each individual company in the group.
- (2) Total operating expenses, maintenance, depreciation and taxes other than income taxes as a percent of operating revenues.
- (3) Coverage calculations represent the number of times available earnings including AFUDC (allowance for funds used during construction), as reported in its entirety, cover fixed charges.
- (4) Coverage calculations represent the number of times available earnings excluding AFUDC (allowance for funds used during construction), as reported in its entirety, cover fixed charges.
- (5) Internal cash generation/gross construction is the percentage of gross construction expenditures provided by internally-generated funds from operations after payment of all cash dividends divided by gross contribution expenditures.
- (6) Gross Cash Flow (sum of net income, depreciation, amortization, net deferred income taxes and investment tax credits, less total AFUDC) plus interest charges, divided by interest charges.
- (7) Common dividend coverage is the relationship of internally-generated funds from operations after payment of preferred stock dividends to common dividends paid.

Source of Information: Annual Reports to Shareholders
Utility COMPUSTAT

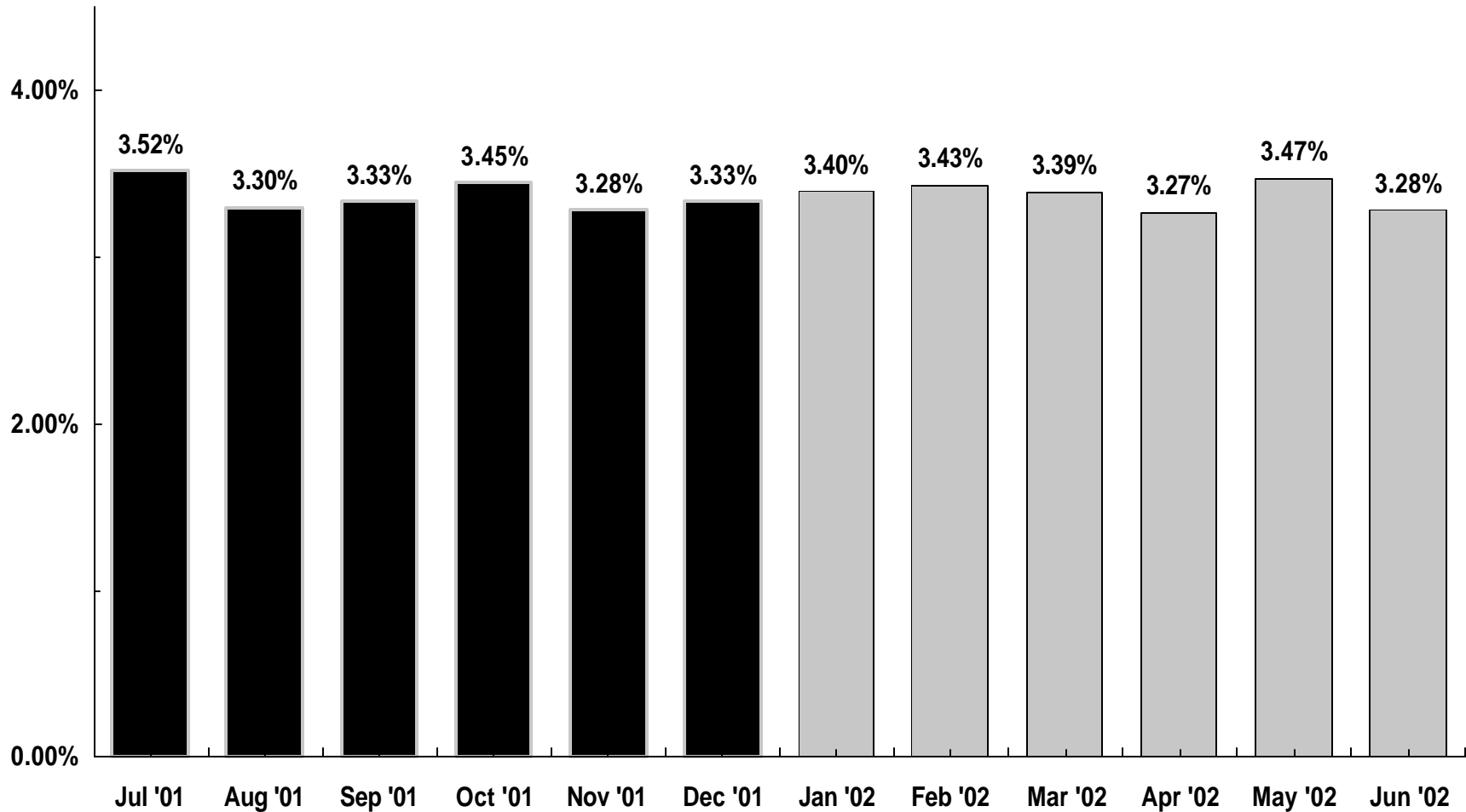
Standard & Poor's Public Utilities
Company Identities

| | Ticker | Credit Rating | | S&P Business Profile | Common Stock Traded | S&P Stock Ranking | Value Line Beta |
|------------------------------|--------|---------------|-------------|----------------------------|---------------------------|-------------------------|-----------------------|
| | | Moody's | S&P | | | | |
| AES Corp. | AES | Baa1 | BBB | 4 | NYSE | B+ | 1.30 |
| Allegheny Energy | AYE | A2 | BBB+ | 2 | NYSE | A- | 0.60 |
| Ameren Corporation | AEE | A1 | A+ | 5 | NYSE | A- | 0.55 |
| American Electric Power | AEP | Baa1 | BBB+ | 5 | NYSE | B+ | 0.55 |
| Calpine Corp. | CPN | B1 | BB+ | | NYSE | NR | 1.10 |
| CINergy Corp. | CIN | Baa1 | A- | 4 | NYSE | B | 0.55 |
| CMS Energy | CMS | Ba1 | BBB- | 6 | NYSE | B | 0.55 |
| Consolidated Edison | ED | A1 | A+ | 3 | NYSE | A- | 0.45 |
| Constellation Energy Group | CEG | A2 | A- | 4 | NYSE | A- | 0.60 |
| DTE Energy Co. | DTE | Baa1 | BBB+ | 6 | NYSE | B+ | 0.55 |
| Dominion Resources | D | A3 | A | 4 | NYSE | B | 0.50 |
| Duke Energy | DUK | A1 | A+ | 5 | NYSE | A- | 0.60 |
| Dynegy Inc. (New) Class A | DYN | Baa3 | BBB | 6 | NYSE | B | |
| Edison Int'l | EIX | Ba3 | BB | 8 | NYSE | B | 0.70 |
| El Paso Corp. | EP | Baa1 | BBB+ | 4 | NYSE | B+ | 0.90 |
| Entergy Corp. | ETR | Baa3 | BBB | 6 | NYSE | B | 0.55 |
| Exelon Corp. | EXC | A3 | A- | 4 | NYSE | B | |
| FPL Group | FPL | A1 | A | 4 | NYSE | B+ | 0.45 |
| FirstEnergy Corp. | FE | Baa2 | BBB | 6 | NYSE | B+ | 0.55 |
| Keyspan Energy | KSE | A3 | A | 3 | NYSE | B+ | 0.55 |
| Kinder Morgan | KMI | Baa2 | BBB | 5 | NYSE | B | 0.65 |
| Mirant Corporation | MIR | Ba1 | BBB- | 7 | NYSE | NR | |
| NICOR Inc. | GAS | Aa2 | AA | 2 | NYSE | B+ | 0.60 |
| NiSource Inc. | NI | Baa2 | BBB | 5 | NYSE | A | 0.45 |
| PG&E Corp. | PCG | Caa2 | D | 9 | NYSE | B | 0.60 |
| PPL Corp. | PPL | Baa1 | A- | 5 | NYSE | B+ | 0.70 |
| Peoples Energy | PGL | Aa2 | AA- | 3 | NYSE | B+ | 0.70 |
| Pinnacle West Capital | PNW | Baa1 | BBB+ | 3 | NYSE | A- | 0.50 |
| Progress Energy, Inc. | PGN | Baa1 | BBB+ | 5 | NYSE | A- | |
| Public Serv. Enterprise Inc. | PEG | Baa1 | A- | 3 | NYSE | B+ | 0.55 |
| Reliant Energy | REI | A3 | BBB+ | 3 | NYSE | B | 0.60 |
| Sempra Energy | SRE | A1 | A+ | 5 | NYSE | NR | 0.60 |
| Southern Co. | SO | A2 | A | 4 | NYSE | A- | |
| TECO Energy | TE | A1 | A- | 4 | NYSE | A | 0.55 |
| TXU CORP | TXU | Baa2 | BBB+ | 5 | NYSE | B | 0.60 |
| Williams Cos. | WMB | Baa2 | BBB+ | 6 | NYSE | B | 1.05 |
| Xcel Energy Inc | XEL | A1 | A- | 5 | NYSE | B+ | |
| Average for S&P Utilities | | <u>Baa1</u> | <u>BBB+</u> | <u>5</u> | | <u>B+</u> | <u>0.64</u> |

Source of Information: Moody's Investors Service
Standard & Poor's Corporation
Standard & Poor's Stock Guide
Value Line Investment Survey for Windows

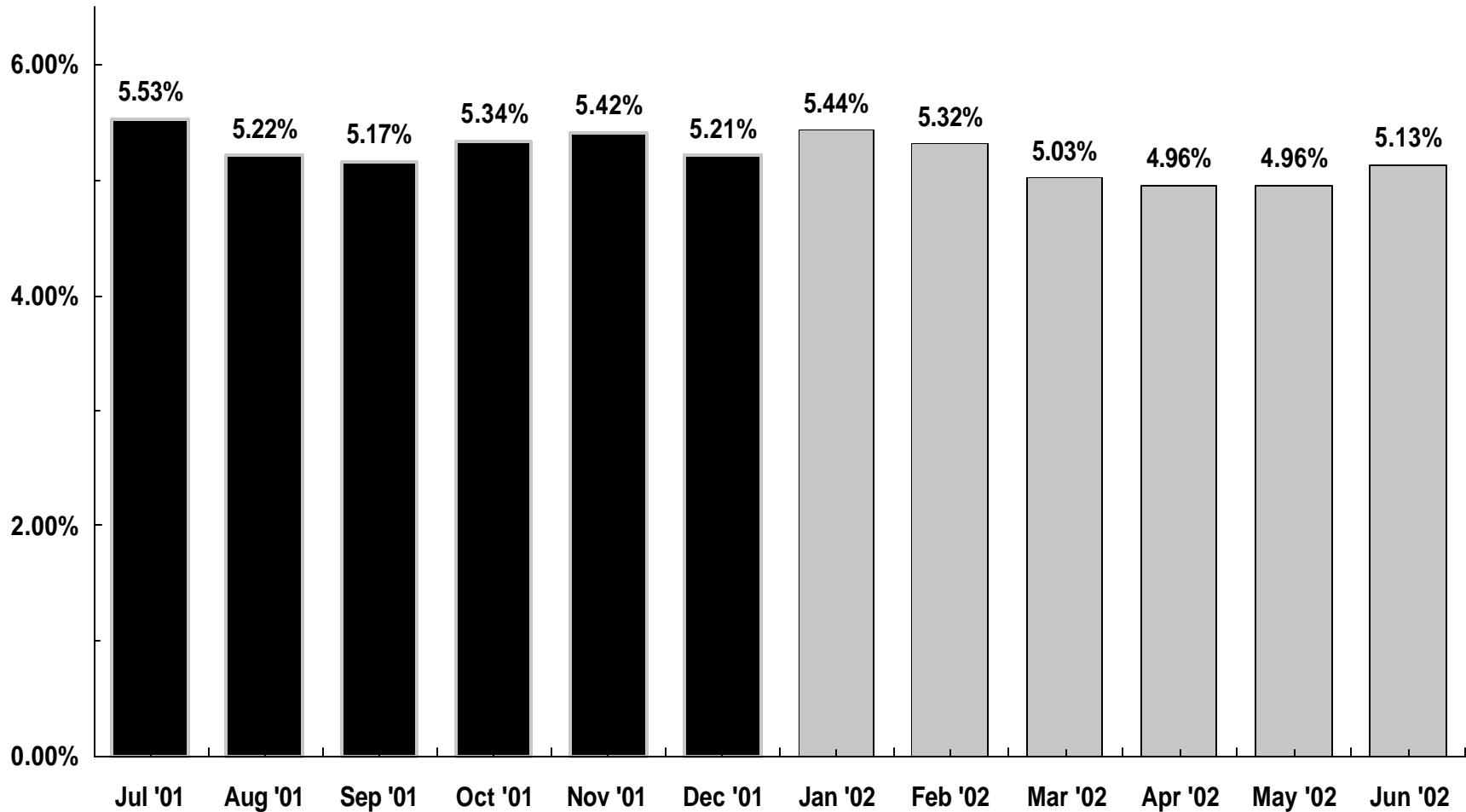
Water Group

Monthly Dividend Yields



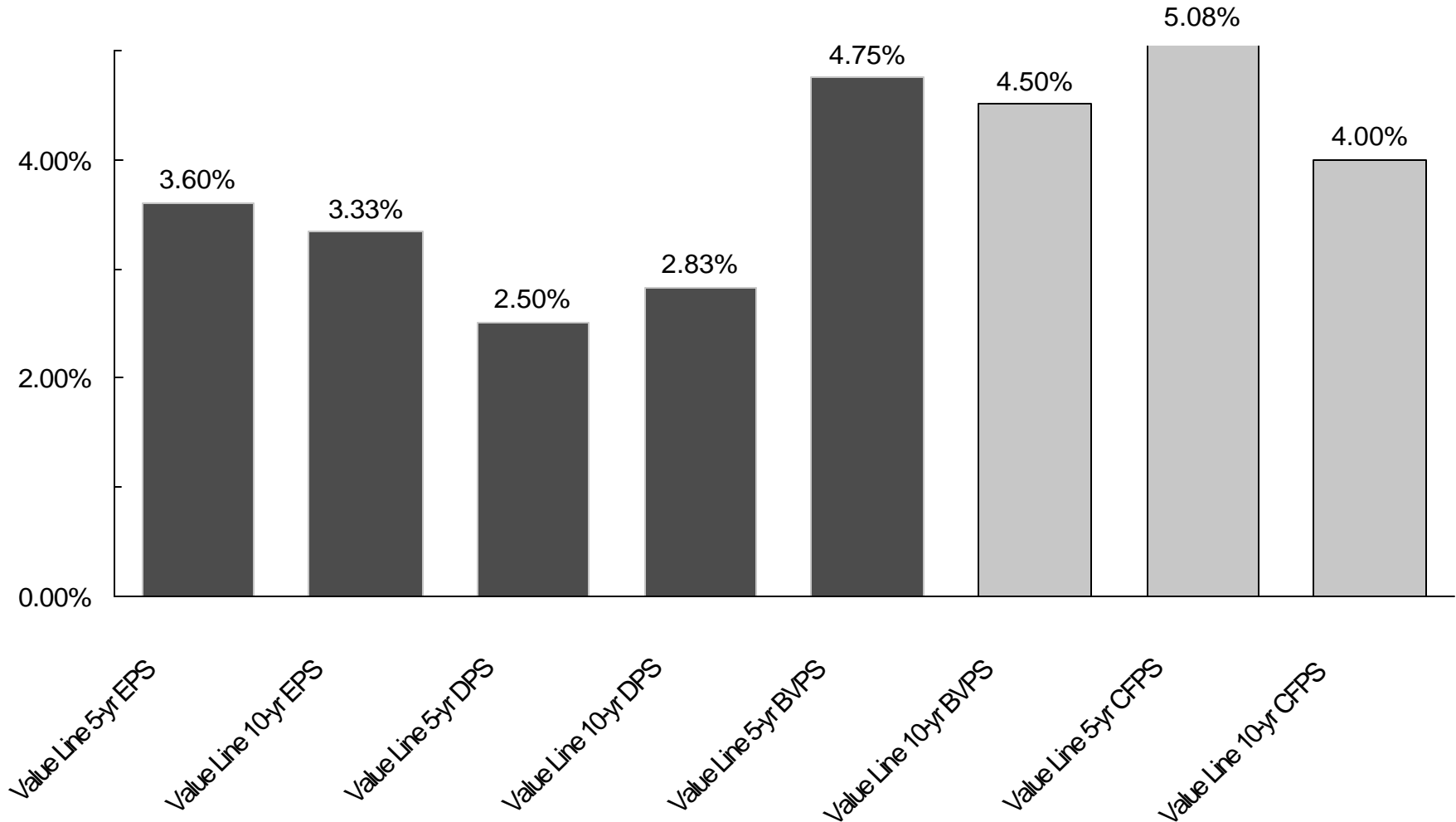
Gas Distribution Group

Monthly Dividend Yields



Water Group

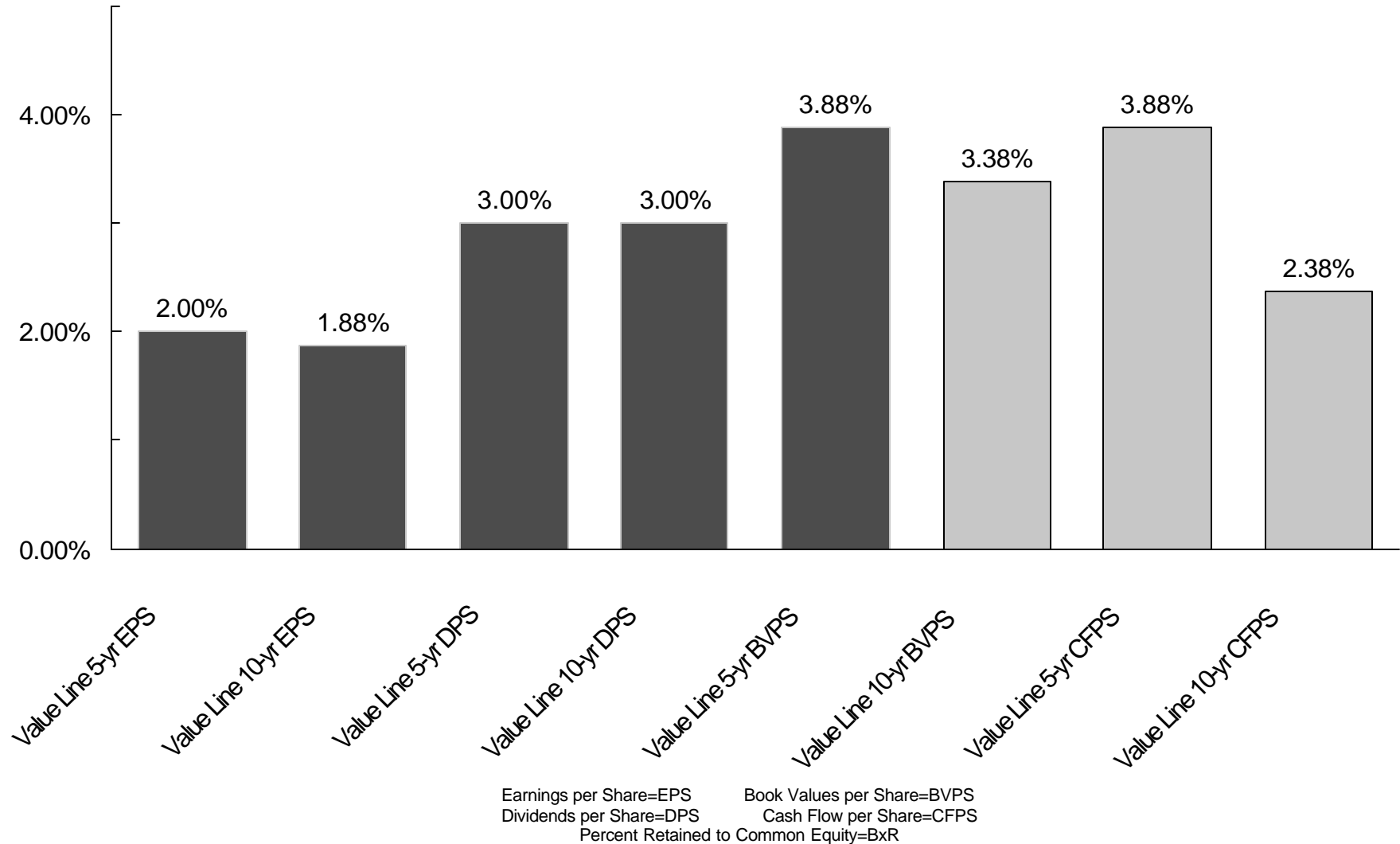
Historical Growth Rates



Earnings per Share=EPS Book Values per Share=BVPS
 Dividends per Share=DPS Cash Flow per Share=CFPS
 Percent Retained to Common Equity=BxR

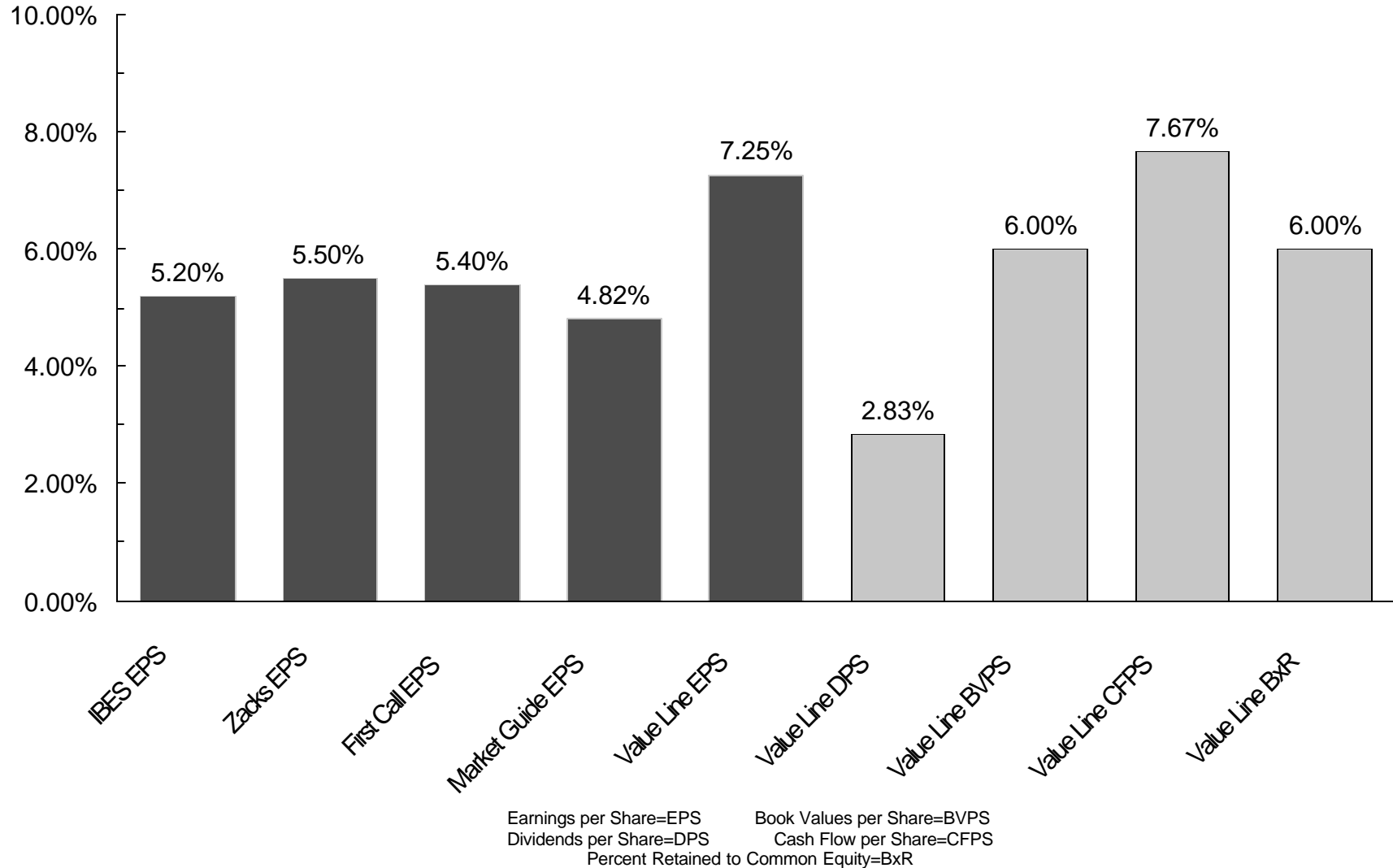
Gas Distribution Group

Historical Growth Rates



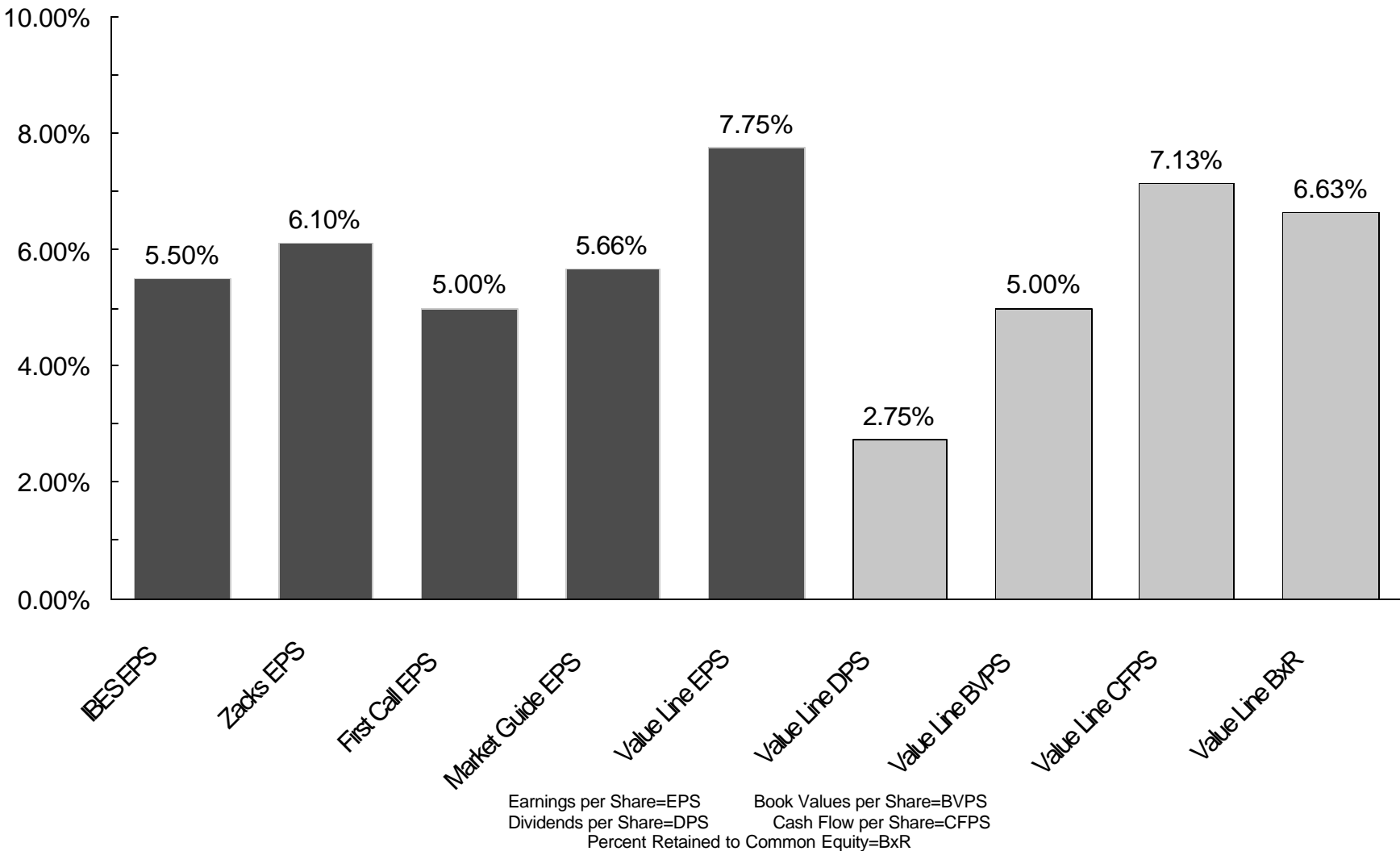
Water Group

Five-Year Projected Growth Rates

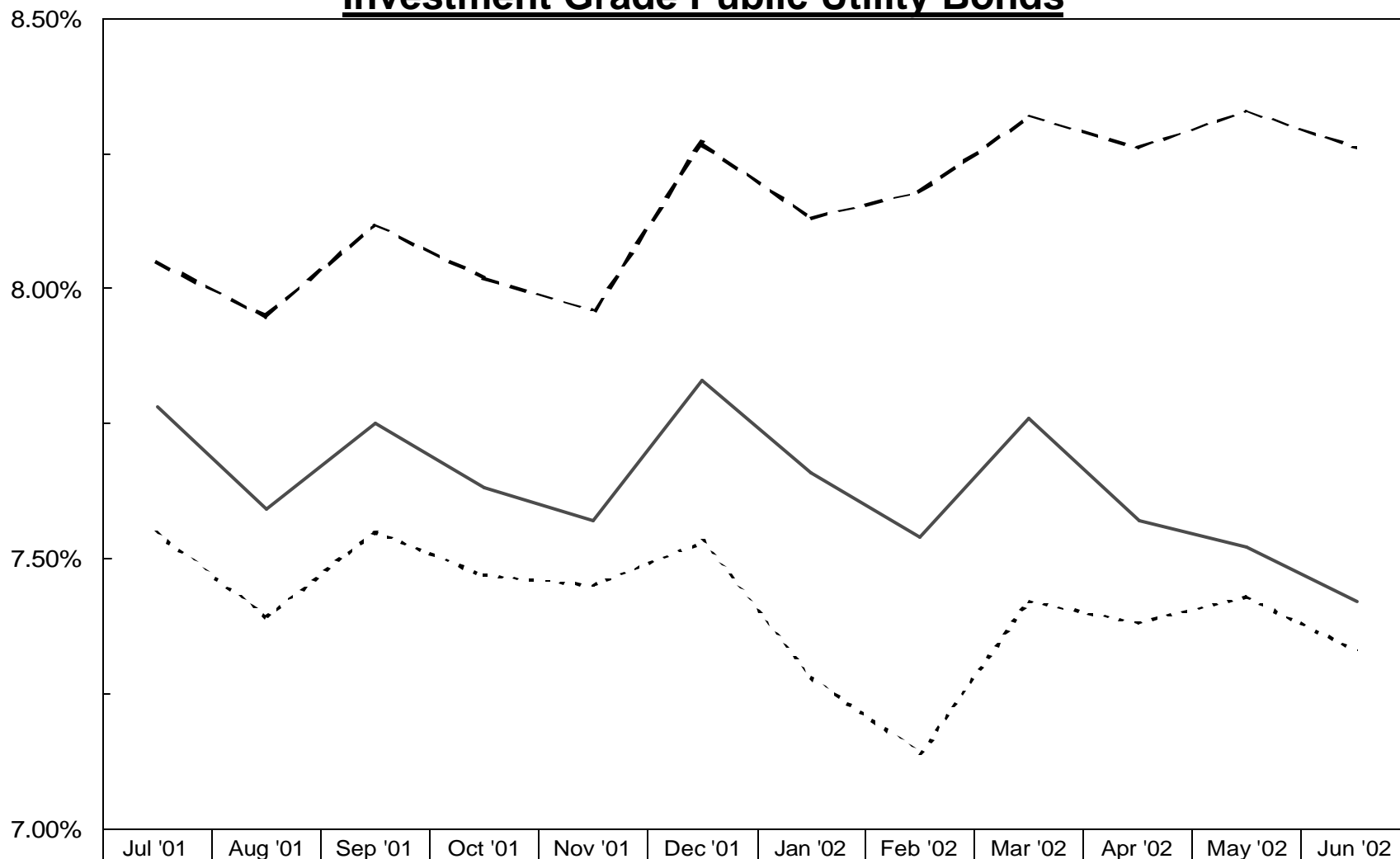


Gas Distribution Group

Five-Year Projected Growth Rates



Interest Rates for Investment Grade Public Utility Bonds

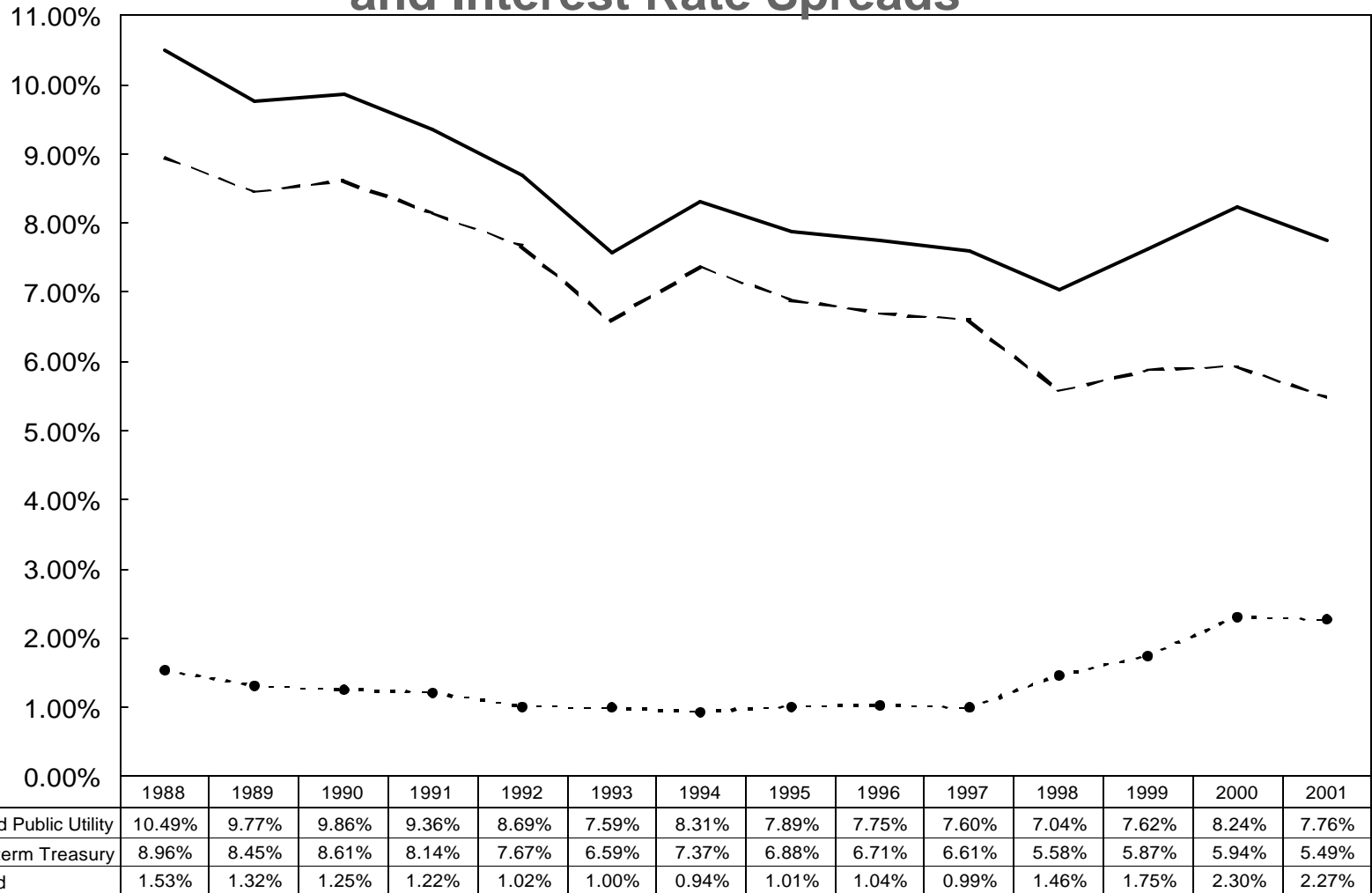


**Interest Rates for Investment Grade Public Utility Bonds
Yearly for 1997-2001
and the Twelve Months Ended June 2002**

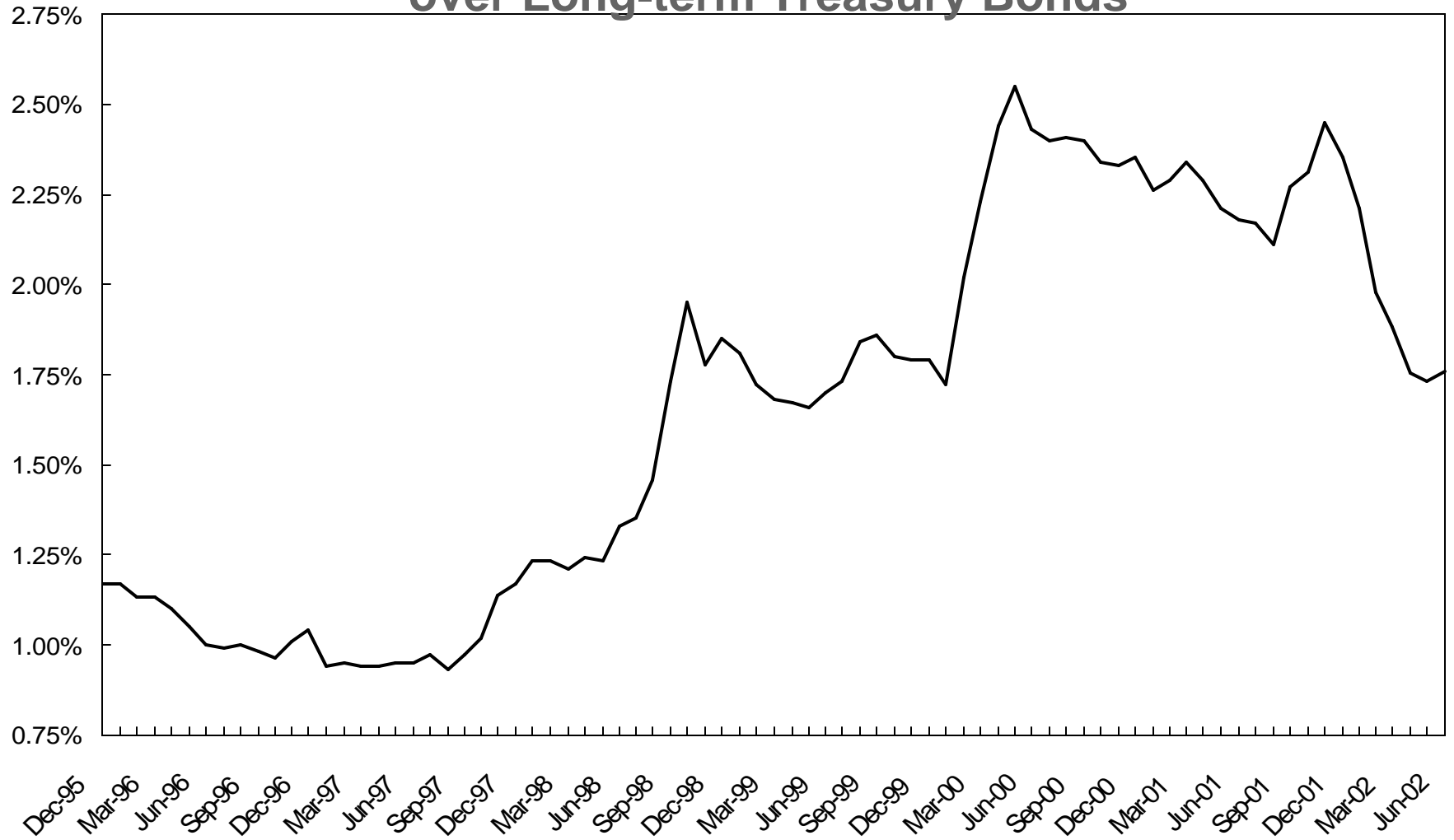
| <u>Years</u> | <u>Aaa Rated</u> | <u>Aa Rated</u> | <u>A Rated</u> | <u>Baa Rated</u> | <u>Average</u> |
|---------------------------------|----------------------|---------------------|--------------------|----------------------|----------------|
| 1997 | 7.42% | 7.54% | 7.60% | 7.95% | 7.63% |
| 1998 | 6.77% | 6.91% | 7.04% | 7.26% | 7.00% |
| 1999 | 7.21% | 7.51% | 7.62% | 7.88% | 7.56% |
| 2000 | 7.88% | 8.06% | 8.24% | 8.36% | 8.14% |
| 2001 | 7.48% | 7.58% | 7.76% | 8.03% | 7.72% |
| Five-Year Average | <u>7.35%</u> | <u>7.52%</u> | <u>7.65%</u> | <u>7.90%</u> | <u>7.61%</u> |
| <u>Months</u> | | | | | |
| Jul-01 | 7.46% | 7.55% | 7.78% | 8.05% | 7.71% |
| Aug-01 | 7.36% | 7.39% | 7.59% | 7.95% | 7.57% |
| Sep-01 | 7.52% | 7.55% | 7.75% | 8.12% | 7.73% |
| Oct-01 | 7.45% | 7.47% | 7.63% | 8.02% | 7.64% |
| Nov-01 | 7.45% | 7.45% | 7.57% | 7.96% | 7.61% |
| Dec-01 | 7.53% | 7.53% | 7.83% | 8.27% | 7.86% |
| Jan-02 | | 7.28% | 7.66% | 8.13% | 7.69% |
| Feb-02 | | 7.14% | 7.54% | 8.18% | 7.62% |
| Mar-02 | | 7.42% | 7.76% | 8.32% | 7.83% |
| Apr-02 | | 7.38% | 7.57% | 8.26% | 7.74% |
| May-02 | | 7.43% | 7.52% | 8.33% | 7.76% |
| Jun-02 | | 7.33% | 7.42% | 8.26% | 7.67% |
| Twelve-Month Average | <u>7.46%</u> | <u>7.41%</u> | <u>7.64%</u> | <u>8.15%</u> | <u>7.70%</u> |
| Six-Month Average | | <u>7.33%</u> | <u>7.58%</u> | <u>8.25%</u> | <u>7.72%</u> |
| Three-Month Average | | <u>7.38%</u> | <u>7.50%</u> | <u>8.28%</u> | <u>7.72%</u> |

Source of Information: Moody's Investors Services, Inc.

Yields on A-rated Public Utility Bonds & Long-term Treasury Bonds and Interest Rate Spreads



Interest Rate Spreads A-rated Public Utility Bonds over Long-term Treasury Bonds



Yield Spreads
A rated Public Utility Bonds
over Long-term Treasury Bonds

| <u>Month</u> | <u>A rated Public Utility</u> | <u>Long-term Treasury</u> | <u>Spread</u> | <u>Month</u> | <u>A rated Public Utility</u> | <u>Long-term Treasury</u> | <u>Spread</u> |
|--------------|-----------------------------------|-------------------------------|---------------|--------------|-----------------------------------|-------------------------------|---------------|
| Dec-95 | 7.23% | 6.06% | 1.17% | | | | |
| Jan-96 | 7.22% | 6.05% | 1.17% | Jan-99 | 6.97% | 5.16% | 1.81% |
| Feb-96 | 7.37% | 6.24% | 1.13% | Feb-99 | 7.09% | 5.37% | 1.72% |
| Mar-96 | 7.73% | 6.60% | 1.13% | Mar-99 | 7.26% | 5.58% | 1.68% |
| Apr-96 | 7.89% | 6.79% | 1.10% | Apr-99 | 7.22% | 5.55% | 1.67% |
| May-96 | 7.98% | 6.93% | 1.05% | May-99 | 7.47% | 5.81% | 1.66% |
| Jun-96 | 8.06% | 7.06% | 1.00% | Jun-99 | 7.74% | 6.04% | 1.70% |
| Jul-96 | 8.02% | 7.03% | 0.99% | Jul-99 | 7.71% | 5.98% | 1.73% |
| Aug-96 | 7.84% | 6.84% | 1.00% | Aug-99 | 7.91% | 6.07% | 1.84% |
| Sep-96 | 8.01% | 7.03% | 0.98% | Sep-99 | 7.93% | 6.07% | 1.86% |
| Oct-96 | 7.77% | 6.81% | 0.96% | Oct-99 | 8.06% | 6.26% | 1.80% |
| Nov-96 | 7.49% | 6.48% | 1.01% | Nov-99 | 7.94% | 6.15% | 1.79% |
| Dec-96 | 7.59% | 6.55% | 1.04% | Dec-99 | 8.14% | 6.35% | 1.79% |
| Jan-97 | 7.77% | 6.83% | 0.94% | Jan-00 | 8.35% | 6.63% | 1.72% |
| Feb-97 | 7.64% | 6.69% | 0.95% | Feb-00 | 8.25% | 6.23% | 2.02% |
| Mar-97 | 7.87% | 6.93% | 0.94% | Mar-00 | 8.28% | 6.05% | 2.23% |
| Apr-97 | 8.03% | 7.09% | 0.94% | Apr-00 | 8.29% | 5.85% | 2.44% |
| May-97 | 7.89% | 6.94% | 0.95% | May-00 | 8.70% | 6.15% | 2.55% |
| Jun-97 | 7.72% | 6.77% | 0.95% | Jun-00 | 8.36% | 5.93% | 2.43% |
| Jul-97 | 7.48% | 6.51% | 0.97% | Jul-00 | 8.25% | 5.85% | 2.40% |
| Aug-97 | 7.51% | 6.58% | 0.93% | Aug-00 | 8.13% | 5.72% | 2.41% |
| Sep-97 | 7.47% | 6.50% | 0.97% | Sep-00 | 8.23% | 5.83% | 2.40% |
| Oct-97 | 7.35% | 6.33% | 1.02% | Oct-00 | 8.14% | 5.80% | 2.34% |
| Nov-97 | 7.25% | 6.11% | 1.14% | Nov-00 | 8.11% | 5.78% | 2.33% |
| Dec-97 | 7.16% | 5.99% | 1.17% | Dec-00 | 7.84% | 5.49% | 2.35% |
| Jan-98 | 7.04% | 5.81% | 1.23% | Jan-01 | 7.80% | 5.54% | 2.26% |
| Feb-98 | 7.12% | 5.89% | 1.23% | Feb-01 | 7.74% | 5.45% | 2.29% |
| Mar-98 | 7.16% | 5.95% | 1.21% | Mar-01 | 7.68% | 5.34% | 2.34% |
| Apr-98 | 7.16% | 5.92% | 1.24% | Apr-01 | 7.94% | 5.65% | 2.29% |
| May-98 | 7.16% | 5.93% | 1.23% | May-01 | 7.99% | 5.78% | 2.21% |
| Jun-98 | 7.03% | 5.70% | 1.33% | Jun-01 | 7.85% | 5.67% | 2.18% |
| Jul-98 | 7.03% | 5.68% | 1.35% | Jul-01 | 7.78% | 5.61% | 2.17% |
| Aug-98 | 7.00% | 5.54% | 1.46% | Aug-01 | 7.59% | 5.48% | 2.11% |
| Sep-98 | 6.93% | 5.20% | 1.73% | Sep-01 | 7.75% | 5.48% | 2.27% |
| Oct-98 | 6.96% | 5.01% | 1.95% | Oct-01 | 7.63% | 5.32% | 2.31% |
| Nov-98 | 7.03% | 5.25% | 1.78% | Nov-01 | 7.57% | 5.12% | 2.45% |
| Dec-98 | 6.91% | 5.06% | 1.85% | Dec-01 | 7.83% | 5.48% | 2.35% |
| | | | | Jan-02 | 7.66% | 5.45% | 2.21% |
| | | | | Feb-02 | 7.54% | 5.56% | 1.98% |
| | | | | Mar-02 | 7.76% | 5.88% | 1.88% |
| | | | | Apr-02 | 7.57% | 5.82% | 1.75% |
| | | | | May-02 | 7.52% | 5.79% | 1.73% |
| | | | | Jun-02 | 7.42% | 5.66% | 1.76% |

S&P Composite Index and S&P Public Utility Index
Long-Term Corporate and Public Utility Bonds
Yearly Total Returns
1928-2001

| Year | S & P Composite Index | S & P Public Utility Index | Long Term Corporate Bonds | Public Utility Bonds |
|--------------------|-----------------------------|----------------------------------|---------------------------------|----------------------------|
| 1928 | 43.61% | 57.47% | 2.84% | 3.08% |
| 1929 | -8.42% | 11.02% | 3.27% | 2.34% |
| 1930 | -24.90% | -21.96% | 7.98% | 4.74% |
| 1931 | -43.34% | -35.90% | -1.85% | -11.11% |
| 1932 | -8.19% | -0.54% | 10.82% | 7.25% |
| 1933 | 53.99% | -21.87% | 10.38% | -3.82% |
| 1934 | -1.44% | -20.41% | 13.84% | 22.61% |
| 1935 | 47.67% | 76.63% | 9.61% | 16.03% |
| 1936 | 33.92% | 20.69% | 6.74% | 8.30% |
| 1937 | -35.03% | -37.04% | 2.75% | -4.05% |
| 1938 | 31.12% | 22.45% | 6.13% | 8.11% |
| 1939 | -0.41% | 11.26% | 3.97% | 6.76% |
| 1940 | -9.78% | -17.15% | 3.39% | 4.45% |
| 1941 | -11.59% | -31.57% | 2.73% | 2.15% |
| 1942 | 20.34% | 15.39% | 2.60% | 3.81% |
| 1943 | 25.90% | 46.07% | 2.83% | 7.04% |
| 1944 | 19.75% | 18.03% | 4.73% | 3.29% |
| 1945 | 36.44% | 53.33% | 4.08% | 5.92% |
| 1946 | -8.07% | 1.26% | 1.72% | 2.98% |
| 1947 | 5.71% | -13.16% | -2.34% | -2.19% |
| 1948 | 5.50% | 4.01% | 4.14% | 2.65% |
| 1949 | 18.79% | 31.39% | 3.31% | 7.16% |
| 1950 | 31.71% | 3.25% | 2.12% | 2.01% |
| 1951 | 24.02% | 18.63% | -2.69% | -2.77% |
| 1952 | 18.37% | 19.25% | 3.52% | 2.99% |
| 1953 | -0.99% | 7.85% | 3.41% | 2.08% |
| 1954 | 52.62% | 24.72% | 5.39% | 7.57% |
| 1955 | 31.56% | 11.26% | 0.48% | 0.12% |
| 1956 | 6.56% | 5.06% | -6.81% | -6.25% |
| 1957 | -10.78% | 6.36% | 8.71% | 3.58% |
| 1958 | 43.36% | 40.70% | -2.22% | 0.18% |
| 1959 | 11.96% | 7.49% | -0.97% | -2.29% |
| 1960 | 0.47% | 20.26% | 9.07% | 9.01% |
| 1961 | 26.89% | 29.33% | 4.82% | 4.65% |
| 1962 | -8.73% | -2.44% | 7.95% | 6.55% |
| 1963 | 22.80% | 12.36% | 2.19% | 3.44% |
| 1964 | 16.48% | 15.91% | 4.77% | 4.94% |
| 1965 | 12.45% | 4.67% | -0.46% | 0.50% |
| 1966 | -10.06% | -4.48% | 0.20% | -3.45% |
| 1967 | 23.98% | -0.63% | -4.95% | -3.63% |
| 1968 | 11.06% | 10.32% | 2.57% | 1.87% |
| 1969 | -8.50% | -15.42% | -8.09% | -6.66% |
| 1970 | 4.01% | 16.56% | 18.37% | 15.90% |
| 1971 | 14.31% | 2.41% | 11.01% | 11.59% |
| 1972 | 18.98% | 8.15% | 7.26% | 7.19% |
| 1973 | -14.66% | -18.07% | 1.14% | 2.42% |
| 1974 | -26.47% | -21.55% | -3.06% | -5.28% |
| 1975 | 37.20% | 44.49% | 14.64% | 15.50% |
| 1976 | 23.84% | 31.81% | 18.65% | 19.04% |
| 1977 | -7.18% | 8.64% | 1.71% | 5.22% |
| 1978 | 6.56% | -3.71% | -0.07% | -0.98% |
| 1979 | 18.44% | 13.58% | -4.18% | -2.75% |
| 1980 | 32.42% | 15.08% | -2.76% | -0.23% |
| 1981 | -4.91% | 11.74% | -1.24% | 4.27% |
| 1982 | 21.41% | 26.52% | 42.56% | 33.52% |
| 1983 | 22.51% | 20.01% | 6.26% | 10.33% |
| 1984 | 6.27% | 26.04% | 16.86% | 14.82% |
| 1985 | 32.16% | 33.05% | 30.09% | 26.48% |
| 1986 | 18.47% | 28.53% | 19.85% | 18.16% |
| 1987 | 5.23% | -2.92% | -0.27% | 3.02% |
| 1988 | 16.81% | 18.27% | 10.70% | 10.19% |
| 1989 | 31.49% | 47.80% | 16.23% | 15.61% |
| 1990 | -3.17% | -2.57% | 6.78% | 8.13% |
| 1991 | 30.55% | 14.61% | 19.89% | 19.25% |
| 1992 | 7.67% | 8.10% | 9.39% | 8.65% |
| 1993 | 9.99% | 14.41% | 13.19% | 10.59% |
| 1994 | 1.31% | -7.94% | -5.76% | -4.72% |
| 1995 | 37.43% | 42.15% | 27.20% | 22.81% |
| 1996 | 23.07% | 3.14% | 1.40% | 3.04% |
| 1997 | 33.36% | 24.69% | 12.95% | 11.39% |
| 1998 | 28.58% | 14.82% | 10.76% | 9.44% |
| 1999 | 21.04% | -8.85% | -7.45% | -1.69% |
| 2000 | -9.11% | 59.70% | 12.87% | 9.45% |
| 2001 | -11.88% | -30.41% | 10.65% | 5.85% |
| Geometric Mean | 10.37% | 8.77% | 5.72% | 5.49% |
| Arithmetic Mean | 12.33% | 11.11% | 6.06% | 5.79% |
| Standard Deviation | 20.30% | 22.65% | 8.76% | 8.11% |
| Median | 15.40% | 11.26% | 4.03% | 4.55% |

**Tabulation of Risk Rate Differentials for
S&P Public Utility Index and Public Utility Bonds
For the Years 1928-2001, 1952-2001, 1974-2001, and 1979-2001**

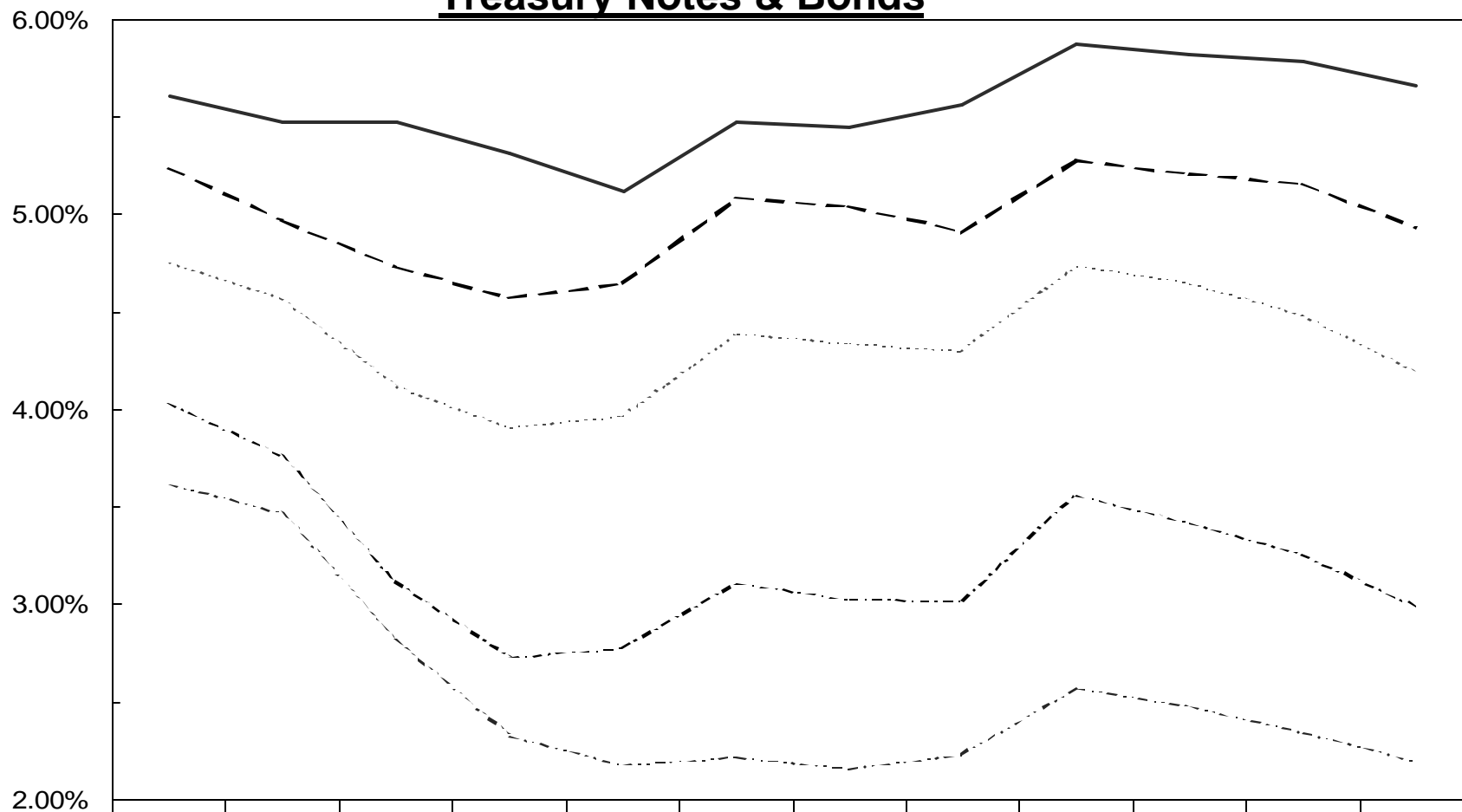
| <u>Total Returns</u> | Range | | <u>Midpoint</u> | Point Estimate | Average of the Midpoint of Range and Point Estimate |
|--------------------------|--------------|--------------|-----------------|----------------|---|
| | Geometric | Median | | Arithmetic | |
| | Mean | | | Mean | |
| <u>1928-2001</u> | | | | | |
| S&P Public Utility Index | 8.77% | 11.26% | | 11.11% | |
| Public Utility Bonds | <u>5.49%</u> | <u>4.55%</u> | | <u>5.79%</u> | |
| Risk Differential | <u>3.28%</u> | <u>6.71%</u> | <u>5.00%</u> | <u>5.32%</u> | <u>5.16%</u> |
| <u>1952-2001</u> | | | | | |
| S&P Public Utility Index | 11.18% | 12.05% | | 12.62% | |
| Public Utility Bonds | <u>6.30%</u> | <u>5.08%</u> | | <u>6.63%</u> | |
| Risk Differential | <u>4.88%</u> | <u>6.97%</u> | <u>5.93%</u> | <u>5.99%</u> | <u>5.96%</u> |
| <u>1974-2001</u> | | | | | |
| S&P Public Utility Index | 13.45% | 14.72% | | 15.33% | |
| Public Utility Bonds | <u>9.22%</u> | <u>9.45%</u> | | <u>9.61%</u> | |
| Risk Differential | <u>4.23%</u> | <u>5.27%</u> | <u>4.75%</u> | <u>5.72%</u> | <u>5.24%</u> |
| <u>1979-2001</u> | | | | | |
| S&P Public Utility Index | 14.37% | 14.82% | | 16.07% | |
| Public Utility Bonds | <u>9.87%</u> | <u>9.45%</u> | | <u>10.24%</u> | |
| Risk Differential | <u>4.50%</u> | <u>5.37%</u> | <u>4.94%</u> | <u>5.83%</u> | <u>5.39%</u> |

Value Line Betas
for
Water Group and Gas Distribution Group

| <u>Company</u> | <u>Beta</u> | <u>Company</u> | <u>Beta</u> |
|----------------------------------|--------------------|----------------------------|--------------------|
| American States Water | 0.65 | Atmos Energy Corporation | 0.55 |
| California Water Serv. Grp. | 0.60 | Laclede Group, Inc. | 0.55 |
| Connecticut Water Services, Inc. | 0.45 | NICOR, Inc. | 0.55 |
| Middlesex Water Company | 0.45 | Peoples Energy Corporation | <u>0.70</u> |
| Philadelphia Suburban Corp. | 0.60 | | |
| SJW Corp. | <u>0.55</u> | Average | <u><u>0.59</u></u> |
| Average | <u><u>0.55</u></u> | | |

Source of Information: Value Line Investment Survey, May 3, 2002 and March 22, 2002

Yields on Treasury Notes & Bonds



| | Jul '01 | Aug '01 | Sep '01 | Oct '01 | Nov '01 | Dec '01 | Jan '02 | Feb '02 | Mar '02 | Apr '02 | May '02 | Jun '02 |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1-Year | 3.62% | 3.47% | 2.82% | 2.33% | 2.18% | 2.22% | 2.16% | 2.23% | 2.57% | 2.48% | 2.35% | 2.20% |
| 2-Year | 4.04% | 3.76% | 3.12% | 2.73% | 2.78% | 3.11% | 3.03% | 3.02% | 3.56% | 3.42% | 3.26% | 2.99% |
| 5-Year | 4.76% | 4.57% | 4.12% | 3.91% | 3.97% | 4.39% | 4.34% | 4.30% | 4.74% | 4.65% | 4.49% | 4.19% |
| 10-Year | 5.24% | 4.97% | 4.73% | 4.57% | 4.65% | 5.09% | 5.04% | 4.91% | 5.28% | 5.21% | 5.16% | 4.93% |
| L-t Avg | 5.61% | 5.48% | 5.48% | 5.32% | 5.12% | 5.48% | 5.45% | 5.56% | 5.88% | 5.82% | 5.79% | 5.66% |

**Interest Rates for Treasury Constant Maturities
Yearly for 1997-2001
and the Twelve Months Ended June 2002**

| <u>Years</u> | <u>1-Year</u> | <u>2-Year</u> | <u>3-Year</u> | <u>5-Year</u> | <u>7-Year</u> | <u>10-Year</u> | <u>20-Year</u> | <u>Long-term Average</u> ⁽¹⁾ |
|---------------------------------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|---|
| 1997 | 5.63% | 5.99% | 6.10% | 6.22% | 6.33% | 6.35% | 6.69% | 6.61% |
| 1998 | 5.05% | 5.13% | 5.14% | 5.15% | 5.28% | 5.26% | 5.72% | 5.58% |
| 1999 | 5.08% | 5.43% | 5.49% | 5.55% | 5.79% | 5.65% | 6.20% | 5.87% |
| 2000 | 6.11% | 6.26% | 6.22% | 6.16% | 6.20% | 6.03% | 6.23% | 5.94% |
| 2001 | 3.49% | 3.83% | 4.09% | 4.56% | 4.88% | 5.02% | 5.63% | 5.49% |
| Five-Year Average | <u>5.07%</u> | <u>5.33%</u> | <u>5.41%</u> | <u>5.53%</u> | <u>5.70%</u> | <u>5.66%</u> | <u>6.09%</u> | <u>5.90%</u> |
| <u>Months</u> | | | | | | | | |
| Jul-01 | 3.62% | 4.04% | 4.31% | 4.76% | 5.06% | 5.24% | 5.75% | 5.61% |
| Aug-01 | 3.47% | 3.76% | 4.04% | 4.57% | 4.84% | 4.97% | 5.58% | 5.48% |
| Sep-01 | 2.82% | 3.12% | 3.45% | 4.12% | 4.51% | 4.73% | 5.53% | 5.48% |
| Oct-01 | 2.33% | 2.73% | 3.14% | 3.91% | 4.31% | 4.57% | 5.34% | 5.32% |
| Nov-01 | 2.18% | 2.78% | 3.22% | 3.97% | 4.42% | 4.65% | 5.33% | 5.12% |
| Dec-01 | 2.22% | 3.11% | 3.62% | 4.39% | 4.86% | 5.09% | 5.76% | 5.48% |
| Jan-02 | 2.16% | 3.03% | 3.56% | 4.34% | 4.79% | 5.04% | 5.69% | 5.45% |
| Feb-02 | 2.23% | 3.02% | 3.55% | 4.30% | 4.71% | 4.91% | 5.61% | 5.56% |
| Mar-02 | 2.57% | 3.56% | 4.14% | 4.74% | 5.14% | 5.28% | 5.93% | 5.88% |
| Apr-02 | 2.48% | 3.42% | 4.01% | 4.65% | 5.02% | 5.21% | 5.85% | 5.82% |
| May-02 | 2.35% | 3.26% | 3.80% | 4.49% | 4.90% | 5.16% | 5.81% | 5.79% |
| Jun-02 | 2.20% | 2.99% | 3.49% | 4.19% | 4.60% | 4.93% | 5.65% | 5.66% |
| Twelve-Month Average | <u>2.55%</u> | <u>3.24%</u> | <u>3.69%</u> | <u>4.37%</u> | <u>4.76%</u> | <u>4.98%</u> | <u>5.65%</u> | <u>5.55%</u> |
| Six-Month Average | <u>2.33%</u> | <u>3.21%</u> | <u>3.76%</u> | <u>4.45%</u> | <u>4.86%</u> | <u>5.09%</u> | <u>5.76%</u> | <u>5.69%</u> |
| Three-Month Average | <u>2.34%</u> | <u>3.22%</u> | <u>3.77%</u> | <u>4.44%</u> | <u>4.84%</u> | <u>5.10%</u> | <u>5.77%</u> | <u>5.76%</u> |

Note: (1) Prior to February 18, 2002, the yields represented the 30-year Treasury constant maturity series.

Measures of the Risk-Free Rate

The forecast of Treasury yields
per the consensus of nearly 50 economists
reported in the Blue Chip Financial Forecasts dated July 1, 2002

| <u>Year</u> | <u>Quarter</u> | <u>1-Year Treasury Bill</u> | <u>2-Year Treasury Note</u> | <u>5-Year Treasury Note</u> | <u>10-Year Treasury Note</u> | <u>Long-term Average</u> |
|-------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------------------|------------------------------|
| 2002 | Third | 2.4% | 3.2% | 4.3% | 5.0% | 5.6% |
| 2002 | Fourth | 2.8% | 3.5% | 4.6% | 5.3% | 5.8% |
| 2003 | First | 3.2% | 3.9% | 4.8% | 5.4% | 5.9% |
| 2003 | Second | 3.6% | 4.2% | 5.1% | 5.6% | 6.0% |
| 2003 | Third | 3.9% | 4.4% | 5.2% | 5.7% | 6.1% |
| 2003 | Fourth | 4.2% | 4.6% | 5.4% | 5.8% | 6.2% |

July 5, 2002

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| | | | |
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The Median of Estimated
PRICE-EARNINGS RATIOS
of all stocks with earnings

17.9

| | | |
|-----------------|-------------------|--------------------|
| 26 Weeks | Market Low | Market High |
| Ago | 10-28-87 | 5-22-01 |
| 19.4 | 10.6 | 18.0 |

The Median of Estimated
DIVIDEND YIELDS
(next 12 months) of all dividend
paying stocks under review

1.8%

| | | |
|-----------------|-------------------|--------------------|
| 26 Weeks | Market Low | Market High |
| Ago | 10-28-87 | 5-22-01 |
| 1.8% | 3.7% | 1.8% |

The Estimated Median Price
APPRECIATION POTENTIAL
of all 1700 stocks in the hypothesized
economic environment 3 to 5 years hence

70%

| | | |
|-----------------|-------------------|--------------------|
| 26 Weeks | Market Low | Market High |
| Ago | 10-28-87 | 5-22-01 |
| 60% | 120% | 65% |

ANALYSES OF INDUSTRIES IN ALPHABETICAL ORDER WITH PAGE NUMBER

Numeral in parenthesis after the industry is rank for probable performance (next 12 months).

| PAGE | | PAGE | | PAGE | | PAGE | |
|-----------------------------------|------|--------------------------------------|------|-------------------------------------|------|-------------------------------------|-----------|
| Advertising (43) | 1924 | Educational Services (14) | 1585 | Insurance (Prop/Cas.) (56) | 591 | Railroad (22) | 288 |
| Aerospace/Defense (5) | 551 | Electrical Equipment (84) | 1001 | Internet (11) | 2222 | R.E.I.T. (73) | 1178 |
| Air Transport (64) | 253 | *Electric Util. (Central) (90) | 695 | Investment Co. (72) | 959 | Recreation (29) | 1841 |
| Apparel (39) | 1651 | Electric Utility (East) (89) | 154 | Investment Co. (Foreign) (26) | 365 | Restaurant (2) | 296 |
| Auto & Truck (15) | 101 | Electric Utility (West) (94) | 1775 | Machinery (61) | 1331 | Retail Building Supply (34) | 882 |
| *Auto Parts (20) | 799 | Electronics (74) | 1022 | Manuf. Housing/Rec Veh (16) | 1555 | Retail (Special Lines) (3) | 1705 |
| Bank (55) | 2101 | Entertainment (50) | 1861 | Maritime (78) | 281 | Retail Store (10) | 1672 |
| Bank (Canadian) (92) | 1571 | Entertainment Tech (60) | 1598 | Medical Services (4) | 632 | Securities Brokerage (88) | 1425 |
| Bank (Midwest) (40) | 617 | Environmental (33) | 355 | Medical Supplies (30) | 179 | Semiconductor (76) | 1050 |
| Beverage (Alcoholic) (37) | 1538 | Financial Svcs. (Div.) (54) | 2131 | Metal Fabricating (75) | 570 | Semiconductor Cap Eq (58) . | 242, 1089 |
| Beverage (Soft Drink) (9) | 1546 | Food Processing (62) | 1481 | Metals & Mining (Div.) (68) | 1224 | Shoe (18) | 1693 |
| Biotechnology (91) | 673 | Food Wholesalers (21) | 1532 | Natural Gas (Distrib.) (87) | 460 | Steel (General) (32) | 581 |
| Building Materials (24) | 851 | Foreign Electron/Entertn (86) | 1562 | Natural Gas (Div.) (93) | 439 | Steel (Integrated) (47) | 1414 |
| *Cable TV (97) | 829 | *Foreign Telecom. (95) | 773 | Newspaper (83) | 1910 | *Telecom. Equipment (66) | 746 |
| Canadian Energy (81) | 430 | Furn./Home Furnishings (46) | 895 | Office Equip & Supplies (8) | 1135 | *Telecom. Services (69) | 538, 720 |
| Cement & Aggregates (67) | 888 | Grocery (31) | 1517 | Oilfield Services/Equip. (53) | 1943 | Textile (6) | 1665 |
| Chemical (Basic) (77) | 1234 | Healthcare Information (23) | 661 | Packaging & Container (19) | 924 | Thrift (28) | 1161 |
| Chemical (Diversified) (80) | 1965 | Home Appliance (35) | 117 | Paper & Forest Products (85) | 906 | Tire & Rubber (12) | 111 |
| Chemical (Specialty) (44) | 480 | Homebuilding (1) | 867 | Petroleum (Integrated) (96) | 405 | Tobacco (45) | 1578 |
| Coal (-) | 532 | Hotel/Gaming (17) | 1879 | Petroleum (Producing) (63) | 1932 | *Toiletries/Cosmetics (13) | 819 |
| Computer & Peripherals (52) | 1101 | Household Products (27) | 940 | *Pharmacy Services (7) | 788 | Trucking/Transp. Leasing (48) | 268 |
| Computer Software & Svcs (41) . | 2168 | Human Resources (38) | 1286 | Power (82) | 974 | Water Utility (70) | 1420 |
| Diversified Co. (59) | 1378 | Industrial Services (42) | 326 | Precious Metals (49) | 1217 | Wireless Networking (51) | 515 |
| Drug (79) | 1242 | Information Services (25) | 380 | Precision Instrument (71) | 124 | | |
| E-Commerce (36) | 1435 | Insurance (Life) (57) | 1202 | Publishing (65) | 1896 | | |

*Reviewed in this week's issue.

In three parts: This is Part 1, the Summary & Index. Part 2 is Selection & Opinion. Part 3 is Ratings & Reports. Volume LVII, No. 44.

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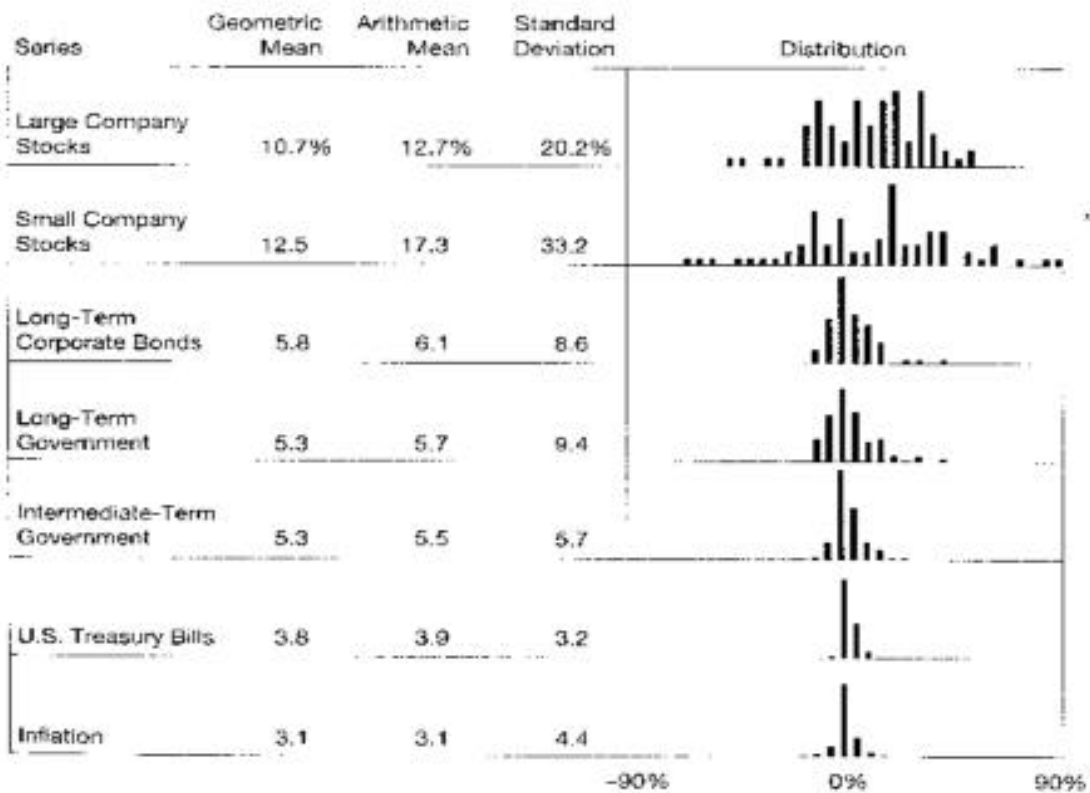
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The Long Run Perspective

Table 2-1

Basic Series: Summary Statistics of Annual Total Returns

from 1926 to 2001



*The 1993 Small Company Stocks Total Return was 142.9 percent.

Comparable Earnings Approach

Using All Value Line Non-Utility Companies with
Timeliness of 3 & 4; Safety Rank of 1, 2 & 3; Financial Strength of B+, B++, A & A+;
Price Stability of 80 to 100; Betas of .45 to .70; and Technical Rank of 3 & 4

| Company | Industry | Timeliness Rank | Safety Rank | Financial Strength | Price Stability | Beta | Technical Rank |
|------------------------|----------|--------------------|----------------|-----------------------|--------------------|------------|-------------------|
| Albertson's Inc. | STEEL | 3 | 2 | A | 80 | 0.65 | 3 |
| Ampco-Pittsburgh | MACHINE | 3 | 3 | B+ | 80 | 0.60 | 4 |
| Banta Corp. | ALCO-BEV | 3 | 3 | B+ | 90 | 0.70 | 3 |
| Brown-Forman 'B' | BUILDING | 4 | 1 | A+ | 95 | 0.65 | 4 |
| Butler Mfg. | FOODPROC | 4 | 2 | B++ | 90 | 0.70 | 3 |
| Church & Dwight | FOODPROC | 3 | 3 | B++ | 80 | 0.55 | 3 |
| ConAgra Foods | FOODPROC | 4 | 2 | A | 80 | 0.65 | 3 |
| Dentsply Int'l | ELECEQ | 3 | 2 | B++ | 85 | 0.65 | 3 |
| Franklin Electric | DEFENSE | 3 | 3 | B+ | 95 | 0.50 | 3 |
| Gen'l Dynamics | FOODPROC | 3 | 1 | A+ | 90 | 0.70 | 3 |
| Haemonetics Corp. | FOODPROC | 4 | 3 | B++ | 80 | 0.70 | 3 |
| Heinz (H.J.) | FOODPROC | 4 | 1 | A+ | 95 | 0.55 | 4 |
| Hershey Foods | FOODPROC | 3 | 1 | A+ | 95 | 0.50 | 4 |
| Hormel Foods | HUMAN | 4 | 1 | A | 100 | 0.50 | 4 |
| Lance Inc. | METALFAB | 3 | 3 | B+ | 90 | 0.55 | 4 |
| Lawson Products | MACHINE | 4 | 1 | A | 90 | 0.55 | 3 |
| McCormick & Co. | APPLIANC | 3 | 2 | B++ | 95 | 0.55 | 4 |
| National Presto Ind. | BANKMID | 4 | 2 | B+ | 100 | 0.50 | 4 |
| Old Nat'l Bancorp | MEDSUPPL | 3 | 1 | A | 100 | 0.60 | 4 |
| Pulitzer Inc. | CHEMSPEC | 4 | 3 | B+ | 95 | 0.65 | 3 |
| Quaker Chemical | OFFICE | 4 | 3 | B+ | 90 | 0.65 | 3 |
| Riviana Foods | INSRPTY | 3 | 2 | B++ | 85 | 0.50 | 3 |
| RLI Corp. | GROCERY | 3 | 3 | B+ | 95 | 0.70 | 4 |
| Ruddick Corp. | FOODPROC | 3 | 3 | B+ | 80 | 0.65 | 4 |
| Sara Lee Corp. | INSRPTY | 3 | 2 | A | 90 | 0.60 | 4 |
| Selective Ins. Group | FOODPROC | 4 | 3 | B+ | 85 | 0.70 | 3 |
| Sensient Techn. | INDUSRV | 3 | 2 | B++ | 95 | 0.60 | 3 |
| ServiceMaster Co. | FOODPROC | 3 | 3 | B+ | 80 | 0.70 | 3 |
| Smucker (J.M.) | DIVERSIF | 3 | 2 | B++ | 90 | 0.65 | 4 |
| Standex Int'l | FOODPROC | 4 | 2 | B++ | 85 | 0.70 | 3 |
| Tecumseh Products 'A' | MACHINE | 4 | 2 | A | 85 | 0.65 | 3 |
| Tootsie Roll Ind. | INSRPTY | 4 | 1 | A+ | 95 | 0.65 | 3 |
| Transatlantic Hldgs. | TOBACCO | 3 | 2 | B++ | 100 | 0.70 | 4 |
| Universal Corp. | TOBACCO | 3 | 2 | A | 85 | 0.60 | 3 |
| UST Inc. | GROCERY | 3 | 3 | B+ | 85 | 0.70 | 3 |
| Weis Markets | GROCERY | 4 | 1 | A | 100 | 0.60 | 3 |
| Wendy's Int'l | MEDSUPPL | 3 | 2 | A | 85 | 0.70 | 3 |
| West Pharmac. Svcs. | MEDSUPPL | 3 | 2 | B+ | 100 | 0.60 | 3 |
| Average | | 3 | 2 | B++ | 90 | 0.62 | 3 |
| Water Group | Range | 3 to 4 | 2 to 3 | B+ to B++ | 80 to 95 | .45 to .65 | 3 to 4 |
| | Average | 4 | 2 | B+ | 88 | 0.55 | 3 |
| Gas Distribution Group | Range | 3 to 4 | 1 to 3 | B+ to A+ | 90 to 100 | .55 to .70 | 3 to 4 |
| | Average | 4 | 2 | B++ | 98 | 0.59 | 4 |

Source of Information: Value Line Investment Survey for Windows, May 2002

Comparable Earnings Approach
Five -Year Average Historical Earned Returns
for Years 1997-2001 and
Projected 3-5 Year Returns

| Company | 1997 | 1998 | 1999 | 2000 | 2001 | Average | Projected 2004-06 |
|-----------------------|--------|-------|--------|--------|-------|---------|----------------------|
| Albertson's Inc. | 21.4% | 20.7% | 16.7% | 15.3% | 13.4% | 17.5% | 14.0% |
| Ampco-Pittsburgh | 11.1% | 11.0% | 9.9% | 10.0% | NMF | 10.5% | 10.0% |
| Banta Corp. | 12.5% | 12.9% | 15.4% | 15.8% | 14.5% | 14.2% | 13.0% |
| Brown-Forman 'B' | 22.6% | 22.0% | 20.8% | 19.6% | 17.5% | 20.5% | 16.5% |
| Butler Mfg. | 13.5% | 11.8% | 14.1% | 15.1% | 7.1% | 12.3% | 10.5% |
| Church & Dwight | 13.7% | 15.9% | 18.6% | 20.9% | 19.1% | 17.6% | 16.5% |
| ConAgra Foods | 24.9% | 22.6% | 23.9% | 27.0% | 17.1% | 23.1% | 18.5% |
| Dentsply Int'l | 17.6% | 19.4% | 19.2% | 19.4% | 18.0% | 18.7% | 19.0% |
| Franklin Electric | 25.0% | 27.1% | 27.8% | 20.9% | 22.0% | 24.6% | 26.0% |
| Gen'l Dynamics | 16.5% | 16.4% | 22.5% | 23.6% | 20.5% | 19.9% | 19.0% |
| Haemonetics Corp. | 8.5% | 9.5% | 12.2% | 13.5% | 13.0% | 11.3% | 13.0% |
| Heinz (H.J.) | 36.2% | 48.9% | 58.0% | 65.8% | 53.5% | 52.5% | 35.5% |
| Hershey Foods | 39.4% | 31.9% | 26.9% | 28.1% | 32.9% | 31.8% | 26.0% |
| Hormel Foods | 13.2% | 15.0% | 19.0% | 19.5% | 18.3% | 17.0% | 16.0% |
| Lance Inc. | 16.1% | 14.8% | 13.7% | 12.6% | 13.4% | 14.1% | 15.0% |
| Lawson Products | 15.3% | 13.6% | 15.9% | 16.3% | 8.5% | 13.9% | 14.5% |
| McCormick & Co. | 25.0% | 27.2% | 31.8% | 38.3% | 33.3% | 31.1% | 27.5% |
| National Presto Ind. | 6.8% | 7.8% | 8.2% | 6.2% | 4.5% | 6.7% | 7.0% |
| Old Nat'l Bancorp | 12.7% | 14.5% | 16.8% | 14.0% | 15.5% | 14.7% | 14.5% |
| Pulitzer Inc. | 21.2% | 7.0% | 2.8% | 4.4% | 1.5% | 7.4% | 7.0% |
| Quaker Chemical | 16.1% | 16.2% | 19.0% | 21.3% | 16.0% | 17.7% | 25.0% |
| Riviana Foods | 15.8% | 16.4% | 18.6% | 18.6% | 14.4% | 16.8% | 13.0% |
| RLI Corp. | 11.3% | 9.6% | 8.8% | 9.2% | 9.5% | 9.7% | 11.0% |
| Ruddick Corp. | 12.5% | 11.4% | 11.4% | 10.8% | 10.8% | 11.4% | 11.5% |
| Sara Lee Corp. | 22.3% | 59.1% | 88.3% | NMF | NMF | 56.6% | 41.5% |
| Selective Ins. Group | 12.3% | 8.8% | 9.4% | 4.6% | 4.5% | 7.9% | 10.5% |
| Sensient Techn. | 17.0% | 17.9% | 18.6% | 16.7% | 15.1% | 17.1% | 16.0% |
| ServiceMaster Co. | 50.4% | 19.9% | 18.6% | 15.9% | 12.7% | 23.5% | 18.0% |
| Smucker (J.M.) | 12.0% | 11.6% | 11.4% | 13.4% | 12.0% | 12.1% | 13.0% |
| Standex Int'l | 19.1% | 19.3% | 18.9% | 18.5% | 14.5% | 18.1% | 19.0% |
| Tecumseh Products 'A' | 10.0% | 9.8% | 13.1% | 6.6% | 4.4% | 8.8% | 10.0% |
| Tootsie Roll Ind. | 17.3% | 17.0% | 16.6% | 16.5% | 12.9% | 16.1% | 14.5% |
| Transatlantic Hldgs. | 13.7% | 15.4% | 11.4% | 11.4% | 10.1% | 12.4% | 13.5% |
| Universal Corp. | 21.5% | 23.8% | 23.6% | 23.7% | 21.4% | 22.8% | 16.5% |
| UST Inc. | 100.3% | 97.2% | 233.7% | 163.3% | 84.6% | 135.8% | 58.0% |
| Weis Markets | 9.4% | 8.5% | 8.5% | 7.9% | 10.1% | 8.9% | 11.0% |
| Wendy's Int'l | 15.2% | 13.9% | 15.6% | 16.1% | 18.5% | 15.9% | 16.0% |
| West Pharmac. Svcs. | 13.1% | 16.3% | 15.7% | 8.3% | 9.0% | 12.5% | 11.0% |
| Average | | | | | | 21.1% | 17.6% |
| Median | | | | | | 16.4% | 14.8% |